



**Office of the National Wind Farm Commissioner**

# Annual Report

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to the Parliament of Australia

**ANNUAL REPORT**

**Year Ending: 31 December 2018**

**Date of Report: 31 March 2019**



## Office of the National Wind Farm Commissioner

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31 March 2019

The Hon Angus Taylor MP  
Minister for Energy  
Parliament House  
CANBERRA ACT 2600

Dear Minister

**Re: 2018 Annual Report by the Office of the National Wind Farm Commissioner**

Pursuant to the National Wind Farm Commissioner's Terms of Reference, I am pleased to provide the 2018 Annual Report to the Australian Parliament on the activities of the Office of the National Wind Farm Commissioner.

The Report covers the Office's activities for the period of 1 January 2018 through to 31 December 2018. The Report also includes a number of observations about the governance, development and operation of wind farm projects along with preliminary recommendations for consideration.

I look forward to discussing the Report with stakeholders in due course.

Sincerely

A handwritten signature in black ink, appearing to read 'Andrew Dyer'.

Andrew Dyer  
National Wind Farm Commissioner

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## COMMISSIONER'S REVIEW

### Introduction

The Office of the National Wind Farm Commissioner is pleased to deliver the Commissioner's third annual report to the Australian Parliament, which covers the Office's activities for the period of 1 January 2018 to 31 December 2018.

In October 2018, the Minister for Energy announced the extension of the Commissioner's role for another three year term, commencing 1 November 2018. The Commissioner's revised Terms of Reference (see [Appendix A](#)) expands the role of the Commissioner to include large-scale solar farms and large-scale energy storage.

The Commissioner's key roles are to:

- facilitate the referral and resolution of complaints received from concerned residents about proposed or operating wind farms, large-scale solar farms (5 MW or more) and energy storage facilities such as large-scale batteries (1 MW or more)
- provide greater transparency on information related to wind farms, large-scale solar farms and energy storage in Australia, and
- identify and promote best practices related to the planning, development and operation of energy projects, including standards and compliance, complaint handling procedures and community engagement.

There are no formal powers associated with the Commissioner's role. The Commissioner relies on effective relationships and the cooperation of a wide array of stakeholders to facilitate the complaints handling process as well as assist in the identification and adoption of best practices recommendations.

The Commissioner is independent and currently reports directly to the Minister for Energy.

### The Year in Review

2018 has been an active year for the Office of the National Wind Farm Commissioner, with a number of major wind farm development approvals, acquisitions and construction works underway across Australia. The latest figures released by the Clean Energy Council indicate that nine large-scale wind farm projects were commissioned in Australia during 2018, contributing an additional generation capacity of approximately 940 MW.

According to the Climate Council report *Powering Progress: States Renewable Energy Race*, released in August 2018, South Australia continues to have the largest amount of installed wind and solar capacity, with both Victoria and New South Wales close behind. All states and territories across Australia, except Western Australia, have committed to renewable energy targets and/or net zero emission targets.

State and territory policies, incentives and schemes are playing a major role in driving the current and upcoming deployment of renewable energy projects. A recent example is the Victorian Renewable Energy Target program, which announced six projects with a total generating capacity of 928 MW. There is also an increase in the development of hybrid projects, particularly in relation to improving the ability to 'firm' wind and solar projects with energy storage and consistent power generation outputs.

During 2018, the Office received a total of 123 new complaints, of which 120 complaints were related to wind farms (compared to 73 complaints about wind farms received in 2017), with a total of 286 complaints received since the Office's inception to 31 December 2018. Given the increase in wind farm development and construction activity during the 2018 year, it is not surprising that the Office received an increase in new complaints. As at 31 December 2018, a total of 18 complaint matters remained open.

Most complaints received and resolved were about proposed wind farms or wind farms under construction. Many of the complaints received related to more systemic issues, such as noise assessment processes and curtailment procedures for turbines, appropriate site planning and consideration of cumulative impacts, auditing of third-party consultant reports in assessing planning documentation, planning and design of connecting transmission lines and the increasing complexities related to transporting turbine components from port to project. These issues and their resolution are considered in more detail within this report.

Stakeholder engagement has also remained a priority and the Commissioner has now met with over 1,200 stakeholders, including representatives from the community and industry, subject matter experts along with local, state and federal government departments and agencies. The addition of large-scale solar and storage projects to the Commissioner's jurisdiction will further increase the number and diversity of relevant stakeholders. Specific details and further information on the Office's stakeholder engagement activities are discussed on pages 15-20 of this report.

Finally, the Commissioner's role was formally reviewed by the Climate Change Authority (the Authority) in 2018. The Australian Government's response to the Authority's review accepted all eleven of the Authority's recommendations, including the continuation and expansion of the Commissioner's role.

### The Year Ahead

According to data from the Clean Energy Regulator, there is now almost 12 GW of renewable energy projects that are generating, under construction or committed to be built, which is almost double the 6,400 MW required to meet the 2020 target. This includes 4,767 MW of accredited projects, 5,506 MW of projects that are fully financed and under construction, and 1,532 MW of projects that are subject to power purchase agreements. The Regulator estimates that over 4,000 MW of capacity will be accredited in 2019, the supply from large-scale renewable energy projects is expected to exceed the RET in 2020.

The Commissioner anticipates intensive activity with new wind and solar farm permitting, construction, commissioning, testing and operations during 2019 and 2020. With this expected increase in activity, the Office expects to play an important role for communities and residents in proximity to projects, continuing to help industry be effective in community engagement and resolution of issues.

In 2019, the Office will focus on:

- broadening its capability to accommodate the expansion into large-scale solar and storage
- continuing its work with key stakeholders to promote and adopt a range of improvements and reforms
- assisting industry to further improve its effectiveness in transparency of information, complaint handling, issue resolution and proactive community engagement, and
- ensuring that the Commissioner's website is further enhanced to improve transparency of the large-scale renewable industry activities and its governance.

The Commissioner looks forward to the ongoing and expanded role, working with communities, government and industry to assist in resolving complaints, promoting best practices and increasing transparency within the large scale renewable industry over the next three years.



**Andrew Dyer**  
National Wind Farm Commissioner



## OVERVIEW

### Background

The National Wind Farm Commissioner is an independent role established in October 2015 by the then Minister for the Environment, the Hon Greg Hunt MP. The Commissioner commenced the role in November 2015 for a three year term.

The role's creation was initiated by Recommendation 5 of the 2015 Senate Committee on Wind Turbines Interim Report, which stated:

*'The Committee recommends that the Commonwealth Government establish a **National Wind Farm Ombudsman** to handle complaints from concerned community residents about the operations of wind turbine facilities accredited to receive renewable energy certificates. The Ombudsman will be a one-stop-shop to refer complaints to relevant state authorities and help ensure that complaints are satisfactorily addressed.'*

Following the acceptance of the Authority's review and recommendations of the Commissioner's role in 2018, the role was extended for a further three years from the initial three year period. The role was also expanded to also include large-scale solar farms and energy storage facilities.

In October 2018, the Commissioner's Terms of Reference were updated by the Minister for Energy to reflect the recommendations of the Authority. The Terms of Reference are available at [Appendix A](#) (page 58).

### Who We Are

The Commissioner is supported by a small team provided by the Department of the Environment and Energy which comprises an Executive Officer, a part-time Complaints Manager and an Administrative Assistant.

### Office Location

The Office of the National Wind Farm Commissioner is located in the Melbourne central business district. The Office can be contacted by toll-free telephone on 1800 656 395, email [nwfc@environment.gov.au](mailto:nwfc@environment.gov.au) or by post at PO Box 24434 Melbourne Victoria 3001. The Office regularly conducts meetings with community members and other stakeholders at these premises. Appointments can be made by contacting the Office. The Commissioner also visits community members and project sites across Australia throughout the year.

## COMPLAINT MANAGEMENT

### Complaint Management Process

A primary function of the Commissioner's Office is to receive and refer complaints from concerned community members about operating and proposed projects and, via a voluntary process, help facilitate resolutions where practical. Information relating to the Office's complaint handling activities are detailed in this report. Many of the complaints received can be complex, taking time to research and resolve.

The Office's complaint management process has been designed to help ensure that the Office functions efficiently and effectively, managing each complaint received appropriately.

It should also be noted that the Office's procedures treat a complaint from a residence as **one** complaint. The complaint may contain a number of issues and may involve a large volume of correspondence with the Office over long periods of time. The Office will record ongoing correspondence in the complainant's file as further information about that complaint. If the complainant lodges a complaint about a substantive new issue or a different wind farm facility, a new complaint may be established and recorded by the Office.

### Complaints Handling Policy

The Office's Complaints Handling Policy, and associated Information Handling Policy, are available on the Commissioner's website and are provided in [Appendix B](#) and [Appendix C](#) of this report. The Complaints Handling and Information Handling Policies were updated in December 2018 to reflect the expanded scope of the Commissioner's role as well as address relevant recommendations made by the Authority.

The core principles that guide the handling of complaints, as outlined in these policies, state that:

- the Office is independent
- the Commissioner's complaint handling procedure is a voluntary process for parties to the complaint
- the Office will use best efforts to assist the parties to find acceptable outcomes and reach agreement on a resolution
- the Office will assist parties to share fact and evidence based information relevant to a complaint so that they can work towards an outcome
- the Office will act impartially and ethically, and
- the Office expect that the parties involved in a matter brought to the Commissioner will act with integrity and respect, and be genuinely seeking an outcome to the issues raised.

The Complaints Handling Policy outlines the Office procedure for receiving and handling complaints. Complaints initially received by the Office are classified as an 'enquiry' and may be formally 'accepted' and progressed by the Office once sufficient information, including written consent to share information, has been provided by the complainant.

In accordance with the policy, the Commissioner may conclude that the complaint would be best responded to directly by another party such as the wind farm developer/operator or a state or local government department or agency. The Commissioner refers complaints to the relevant party and may assist in facilitating discussion to identify resolutions where appropriate. The Commissioner may also seek to conciliate the complaint between a complainant and the other party.

The Commissioner has the discretion to close a complaint at any time. Reasons for closure of a complaint are detailed in Sections 26 and 27 of the policy. Sections 30 and 31 of the policy provides guidance to complainants in the case that they are not satisfied with an outcome of the complaint handling process.

The Office is also guided by the Information Handling Policy when handling complaints received by the Office. This policy outlines what information the Office collects, how this information may be disclosed as well as information on confidentiality and privacy. Both policies are available on the Office's website at [www.nwfc.gov.au](http://www.nwfc.gov.au).

### Complaint Activity

From the period of 1 January 2018 to 31 December 2018, the Office received a total of 123 complaints. The breakdown of the complaints received are as follows:

- eight matters were received relating to four operating wind farms
- 95 matters were received relating to 34 proposed wind farms
- three matters were received relating to three proposed solar farms, and
- 17 matters did not specify a particular project or development.

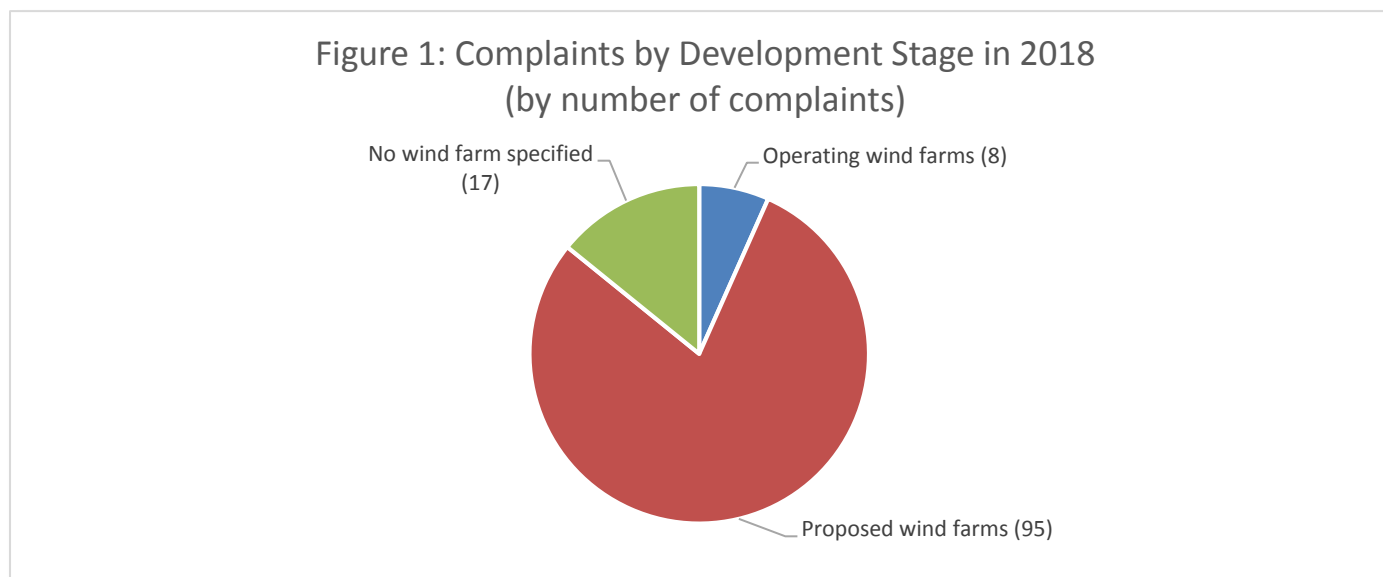
From the Office's inception in November 2015 through to 31 December 2018, the Office has received a total of 286 complaints. In summary, for the period 1 November 2015 through 31 December 2018, the Office had received:

- 65 matters relating to 11 operating wind farms
- 191 matters relating to 51 proposed wind farms
- three matters relating to three proposed solar farms, and
- 27 matters that did not specify a particular project or development.

As at 31 December 2018, of the total of 286 complaints received since inception, 268 of those complaints had been closed by the Office. The remaining 18 matters are at various stages of the complaint handling process.

### Proposed Wind Farms versus Operating Wind Farms

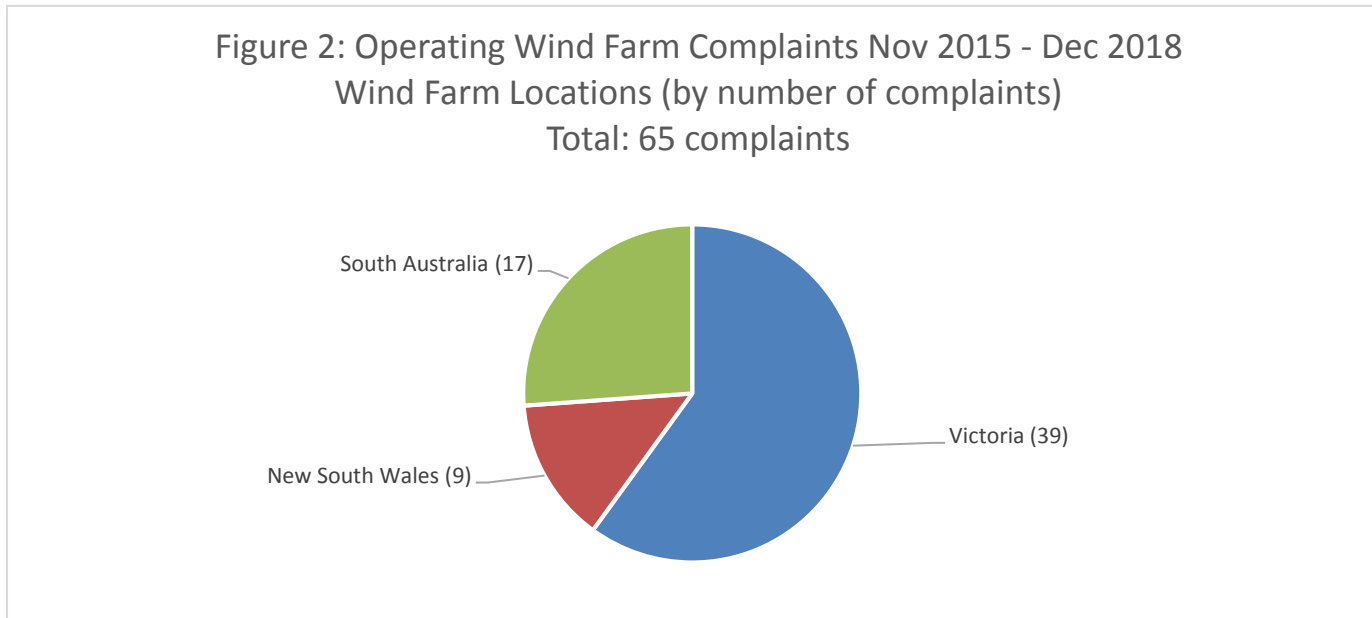
Figure 1 below provides information on the number of complaints the Office has received in relation to proposed and operating wind farms for the period of 1 January 2018 to 31 December 2018. Proposed wind farms are those which are at either the planning stage, have been approved by a state planning authority or are under construction – but not yet operating at the time the complaint was registered.





### Operating Wind Farms – Complaints in 2018

From the period of 1 January 2018 to 31 December 2018, the Office received eight complaints in relation to four operating wind farms. All four operating wind farms were located in Victoria. Three of the four wind farms are established projects that the Office has received complaints previously while the other wind farm was commissioned in 2018. As at 31 December 2018, seven of these complaints were recorded as closed. Figure 2 below provides information on the location of all complaints relating to operating wind farms from the period of the Office’s inception to 31 December 2018.



### Proposed Wind Farms – Complaints in 2018

From the period of 1 January 2018 to 31 December 2018, the Office received 95 complaints in relation to 34 proposed wind farms and three complaints about three proposed solar farms. As at 31 December 2018, 79 of these complaints were recorded as closed. Figures 3 and 4 below provide information on the location of all complaints relating to proposed wind farms from the period 1 January 2018 to 31 December 2018. Figures 5 and 6 provide data on the location of all complaints relating to proposed wind farms from the period of the Office’s inception up until 31 December 2018.

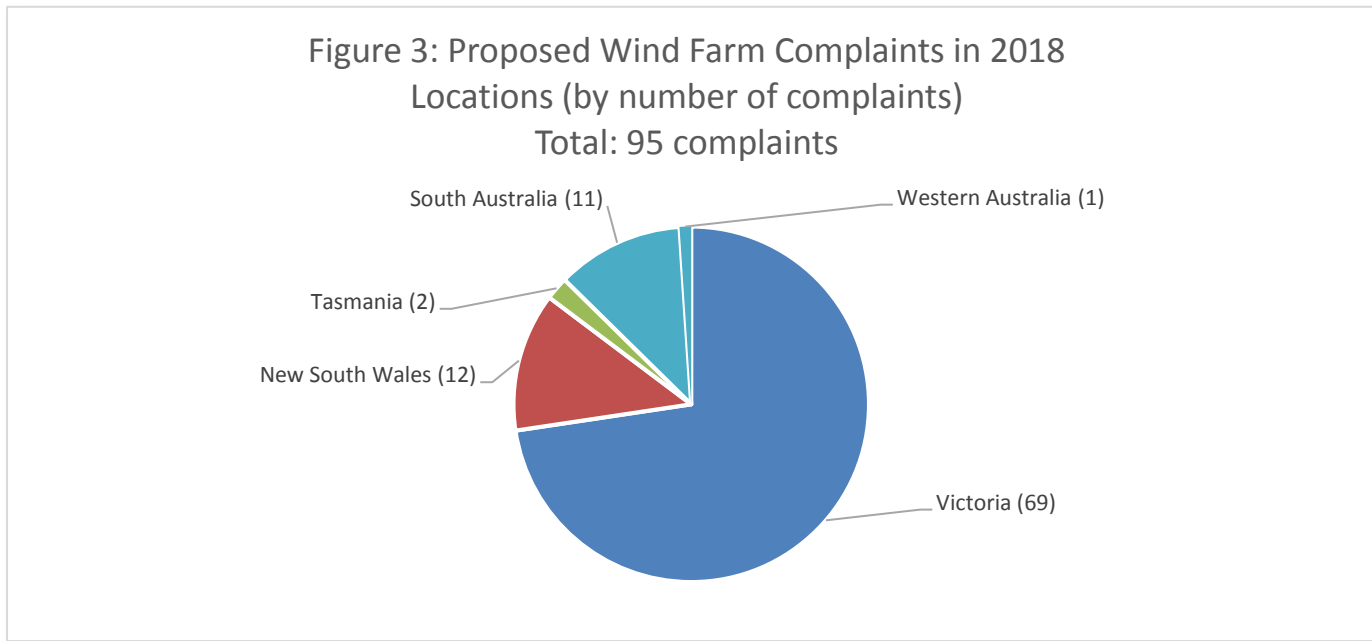


Figure 4: Proposed Wind Farm Complaints in 2018  
Locations (by number of wind farms)  
Total: 34 projects

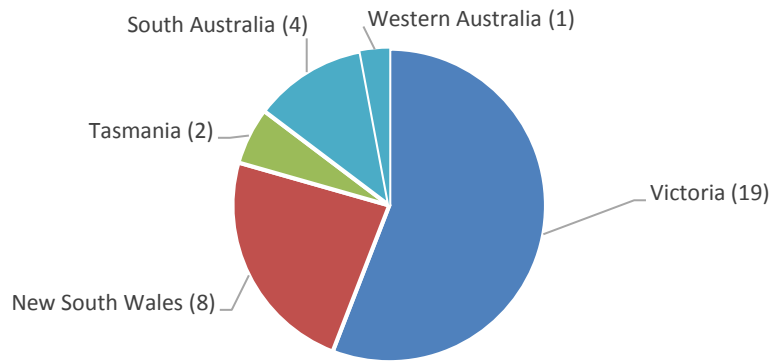


Figure 5: Proposed Wind Farm Complaints Nov 2015 -Dec 2018  
Locations (by number of complaints)  
Total: 191 complaints

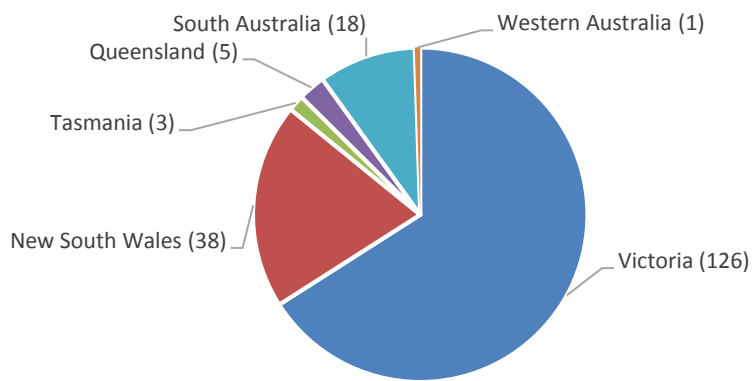
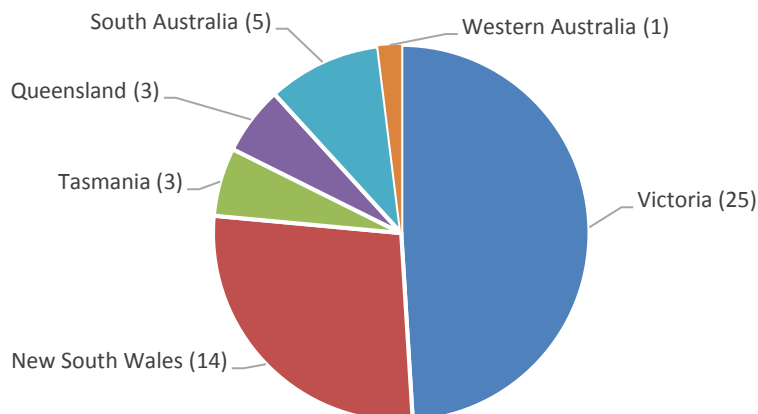
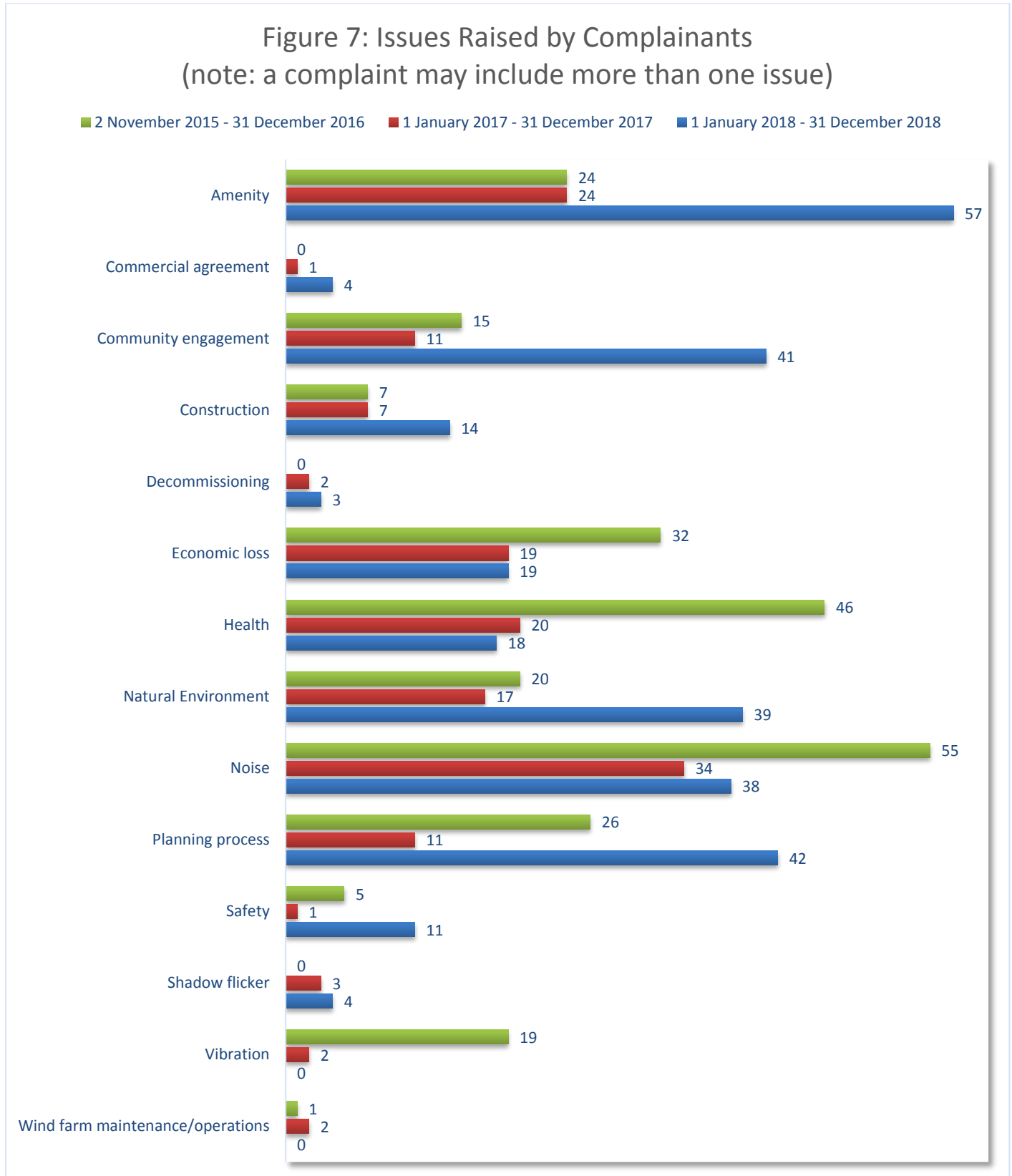


Figure 6: Proposed Wind Farm Complaints Nov 2015 - Dec 2018  
Locations (by number of wind farms)  
Total: 51 projects



### Issues Raised in 2018

Complaints made to the Office may be for a number of issues. The Office records complaint issues raised by the complainant when contacting the Office. Figure 7 below provides comparative data on the types of complaint issues raised with the Office and the number of times the issue has been raised by complainants for the previous three reporting years. The most common complaint issues raised are related to noise from turbines, amenity impacts, health impacts, planning processes and environmental impacts.



The Office notes that while there has been a reduction in many categories of complaint issues during the 2017 calendar year, the increase in complaint issues raised in 2018 is commensurate with the increased level of wind farm activity during the last year, particularly in relation to construction, planning processes, natural environment and community engagement. However, the comparative data also demonstrates that there are, relatively, significantly less complaints relating to noise, health, vibration and economic loss during the 2018 reporting period than during the 2016 reporting period after the Commissioner's role first commenced.

### Resolutions and Closure

For the period of 1 January 2018 to 31 December 2018, 122 complaints were closed. Of these 122 closed complaints, 17 complaints were lodged with the Office prior to 1 January 2018.

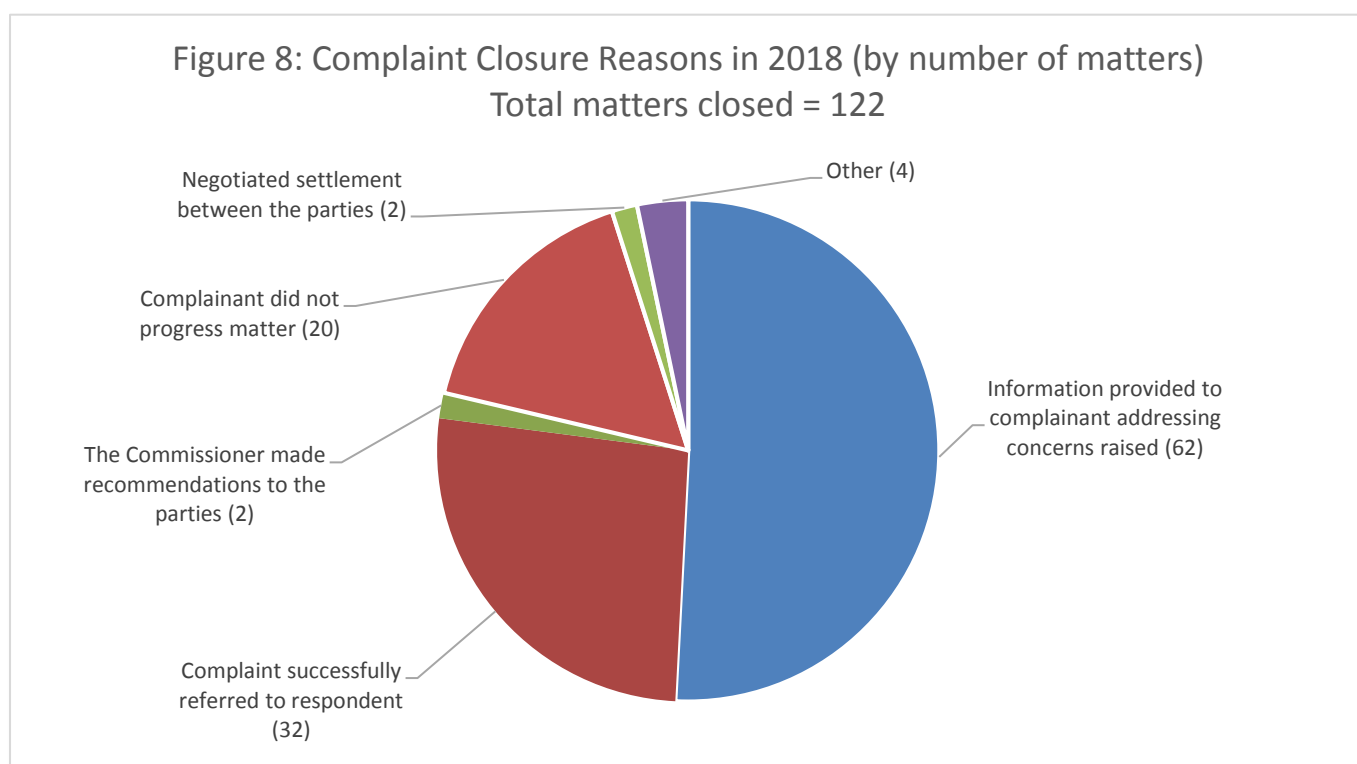
There are a range of reasons that the Office may consider in closing a matter, as detailed in the Commissioner's Complaints Handling Policy. Since the period of the Office's inception to 31 December 2018, 268 of the 286 complaints received by the Office have been closed. There were 18 open complaints as at 31 December 2018.

Many complaint matters are resolved by the provision of factual information to the complainant, addressing the concerns raised and/or connecting the complainant to the appropriate contacts at the respondent organisation.

Matters where the complainant did not progress the complaint include the complainant withdrawing the complaint, not providing consent to share information with other parties, not providing sufficient information or evidence for the Commissioner to assess the merits of the complaint or declining to meet, as reasonably requested, with the Commissioner and/or respondent to progress a resolution outcome.

Matters recorded as 'other' were situations in which further efforts would be unlikely to result in a resolution or the complainant engaged legal representation to pursue their complaint.

Figure 8 below provides a summary of high level closure reasons for matters closed in 2018.



## 2017 ANNUAL REPORT

On 24 May 2018, the Commissioner's 2017 Annual Report was tabled in the Australian Parliament. This report provided information on the Office's complaint data and activities and set out a number of updates to the Commissioner's preliminary observations and recommendations that were set out in the 2016 Annual Report. These observations and recommendations were designed to promote best practice within the industry and improve the governance and regulation of the industry.

Following the release of the report, the report was made available on the Commissioner's website and was also distributed to a wide range of stakeholders. Throughout the year, the Commissioner undertook extensive consultation with stakeholders on the updated recommendations in the report and participated in a number of conferences, presentations and meetings with proponents, government agencies and community groups across Australia.

As with the 2016 Annual Report, feedback on the Commissioner's recommendations has been positive and constructive, indicating that the role of the Commissioner has been well received and that the role continues to provide value. A number of positive changes in industry and governance practices have already been implemented as a result of the Commissioner's advocacy and recommendations, including changes to planning requirements, noise assessment processes, complaint handling standards and safety regimes.

The Commissioner considers the report's observations and recommendations to be a key part of identifying and promoting best practices relating to the planning, development and operation of wind farms and renewable developments more broadly. The 2018 report has continued to make a number of updates and additions to the recommendations outlined in the 2017 Annual Report. The updated observations and recommendations are now easily accessible on the Commissioner's website at:

<http://www.nwfc.gov.au/observations-and-recommendations>.

The full report is available on the Commissioner's website at:

<http://www.nwfc.gov.au/publications/annual-report-2017>.

## REVIEW AND RE-APPOINTMENT OF THE NATIONAL WIND FARM COMMISSIONER

In early 2018, the Minister requested the Climate Change Authority (the Authority) undertake a review of the Commissioner's role, as per the Commissioner's terms of reference. The Authority is an independent statutory agency, which provides expert advice to the Government on climate change policy.

The Authority was requested to assess the Commissioner in fulfilling the terms of reference, the ongoing need for the role, scope of the role and possible models for funding. In undertaking this review, the Authority sought the views of a large cross-section of stakeholders, including residents, industry and government. The Authority received more than 60 stakeholder submissions during the consultation period.

On 31 May 2018, the Authority released their review of the Commissioner's role. This report is available at:

<http://www.climatechangeauthority.gov.au/review-national-wind-farm-commissioner>

The Authority's report summarises and conveys feedback from stakeholder submissions and interviews. The Authority found that the Commissioner had dealt constructively with complaints and that, for many stakeholders, the Commissioner had exceeded expectations. The Authority also noted that some stakeholders remained unhappy with the outcome of their complaints.

The Authority also noted that the Commissioner's best practice recommendations have been valuable for industry and that guidance from the Commissioner has also positively influenced state government processes relating to wind farms.

The Authority report made eleven recommendations. The principal recommendations included the following:

- the role of the Commissioner should continue for another three years until 31 October 2021
- the scope of the Commissioner should be expanded to cover large-scale solar and energy storage such as large-scale batteries
- the Commissioner's role should continue to be funded by the Australian Government, with consideration of a modest increase to the budget, and
- the role and funding options should be reviewed again in 2021.

In all, the Authority concluded that the expanded role offers an efficient and relatively low cost way of helping manage community concerns about the deployment of large-scale solar, wind and storage projects.

The Authority also made recommendations designed to enhance the accessibility and transparency of the Commissioner's complaints handling processes as well as measures to increase public awareness of the role and best practice recommendations. The Commissioner has commenced implementing these recommendations.

On 18 October 2018, the Australian Government published a response to the review, which accepted all eleven recommendations set out in the Authority's report. On 31 October 2018 the Minister announced the re-appointment of the Commissioner for a further three-year term commencing 1 November 2018. The Minister also announced that the role would expand to include large-scale solar farms (up to 5 MW) and large-scale energy storage facilities (up to 1 MW).

## STAKEHOLDER ENGAGEMENT

The Commissioner works directly with a range of stakeholders to provide information and identify needs that can be met through best practice guidance and other information. In particular, stakeholder engagement with community, industry and government stakeholders continues to be a key priority for the Commissioner.

As at 31 December 2018, the Commissioner has engaged directly with over 1,200 stakeholders, including concerned and supportive community members, industry representatives, federal, state and local governments as well as experts engaged by the industry. The Commissioner meets regularly with many of these stakeholders to work through issues, resolve complaints, provide briefings and maintain effective working relationships.

The Commissioner also works collaboratively with stakeholders to encourage the adoption of best practices to address systemic issues and has engaged with stakeholders to reach positive outcomes, both for the affected individuals and facilitating improvements to governance frameworks.

### Communities, Residents and Project Sites Visited

During 2018, the Commissioner continued to visit wind farm locations to meet with a range of concerned residents, supportive residents and representatives of community groups to understand their perspectives.

The Commissioner also led and participated in a variety of events and meetings with community groups, Community Consultative Committees (CCC) and other liaison groups, often related to specific issues regarding approved and proposed wind farms.

During 2018, participation in community and committee meetings included:

- Cobden (Naroghid) Community Meeting, Cobden, Victoria – January 2018
- Noorat Community Meeting, Noorat, Victoria – March 2018
- Lal Lal wind farm community group meetings, Victoria – May 2018, July 2018, October 2018
- Rye Park Wind Farm Community Consultative Committee, Yass, New South Wales – May 2018
- Hawkesdale Community Meeting, Hawkesdale, Victoria – July 2018
- Mount Emerald Community Consultative Committee, Queensland – November 2018, and
- Coopers Gap Community Consultative Committee, Queensland – November 2018.

Issues raised during these forums have helped assist discussions with industry and government in considering the development of future policy and guidelines as well as assisted the community groups to better prioritise and articulate their concerns.

Since the inception of the Commissioner's role, the Commissioner has visited 52 project sites to meet with community members, proponents and other stakeholders (see Tables 1 and 2 below). Visits have included meetings with concerned residents to discuss specific complaint matters as well as directly experience the operation of the wind farm and/or the affected area. The Commissioner has also visited project sites to gain a better understanding of issues such as logistics during the construction phase through to observation of turbines that are nearing the decommissioning phase.

In a number of cases, largely due to complainant handling activities, some wind farm locations have been visited multiple times.

**Table 1: List of 48 wind farm sites visited by the Commissioner:**

State	Wind farm	
<b>Victoria (19 sites)</b>	Alberton	Mt Gellibrand
	Ararat	Mt Mercer
	Bald Hills	Naroghid
	Cape Bridgewater	Oaklands Hill
	Golden Plains	Salt Creek
	Hawkesdale	Toora
	Hepburn	Waubra
	Lal Lal	Wonthaggi
	Macarthur	Willatook
	Moorabool	
<b>New South Wales (16 sites)</b>	Bango	Gullen Range
	Collector	Gunning
	Coppabella	Hills of Gold
	Crookwell I	Jupiter
	Crookwell II	NSW Energy Cluster
	Crudine Ridge	Sapphire
	Cullerin Range	White Rock
	Glen Innes	Walcha
<b>South Australia (4 sites)</b>	Hallet	Snowtown
	Palmer	Waterloo
<b>Queensland (5 sites)</b>	Coopers Gap	Mt Emerald
	High Road	Windy Hill
	Kaban Green Power Hub	
<b>Western Australia (3 sites)</b>	Albany	Mount Barker
	Denmark	
<b>Tasmania (1 site)</b>	Musselroe	

**Table 2: List of four solar farm sites visited by the Commissioner:**

State	Solar farm
<b>New South Wales (4 sites)</b>	Jemalong CSP Pilot Plant
	Parkes Solar Farm
	New England Solar Farm
	Walcha Solar Farm



## Industry

The Office also identifies opportunities for improvement within the large-scale renewable industry as well as the planning and regulation of projects. Throughout 2018, the Commissioner has continued to maintain a strong focus on proactively engaging with the wind energy industry on a wide range of matters, including approaches to community engagement, complaint handling and transparency of information. Ongoing consultation meetings with various industry stakeholders have been invaluable in gaining an understanding of current practices and standards as well as identifying areas where further improvements could be made by the industry.

Industry consultation has also been vital in receiving updates on specific projects, proactively addressing potential issues, gaining industry perspectives on best practice processes and how current planning and governance processes have impacted particular projects and communities.

As a result, the Office has met with many of the industry's proponents to obtain detailed project and company briefings as well as review approaches and practices that may minimise potential issues.

The Commissioner has met with wind farm proponents to provide guidance in developing:

- approaches to resolve specific complaints within communities
- innovative solutions to provide benefits to local communities affected by wind farm developments
- complaint handling policies and procedures
- transparent noise assessment regimes
- appropriate setback distances
- best practice approaches to approaching effective and fair commercial agreements with wind farm hosts and neighbours
- providing accessible and helpful information on project websites to enable community members to have better access to information about wind farm projects, and
- emergency management procedures for wind farms in the case of incidents such as bushfires, including practical measures to minimise the risk of disturbance to firefighting operations.

Industry members continue to welcome such discussions and assistance, with many developers remaining in regular contact with the Office to provide progress updates and report the resolution of issues.

The response from many of these proponents would indicate that industry values the work of the Office, evidenced by the time taken to meet with the Office and their adoption of many of the Commissioner's suggestions. Encouragingly, industry groups and developers have proactively reached out to the Office on many occasions, seeking input on a wide range of issues.

The Office has also engaged with and regularly presented to industry associations such as the Clean Energy Council and the Australian Wind Alliance. These forums enable the Commissioner to brief the leadership of the wind industry across the activities and findings of the Office and engage the industry on systemic and emerging issues. In late 2018, following the expansion of the Commissioner's role, the Commissioner also presented to the Clean Energy Council's Utility Scale Solar and the Energy Storage Directorates.

Given the level of construction works across Australia that have commenced or are expected to commence in the near future, the Commissioner will maintain a strong focus on providing support to industry to ensure

that proponents are aware of best practices in relation to community engagement and compliance with planning requirements.

## **Government**

Throughout 2018, the Commissioner continued to engage with all levels of government to identify opportunities for improved governance arrangements and ensure that appropriate processes are being considered for the planning, assessment and monitoring of wind farms. The Commissioner has also briefed numerous members of state and federal parliaments, along with the relevant Ministers, on current issues as well as proposed initiatives and reforms.

After investigating a range of systemic issues arising from complaints during the year, the Commissioner has also made recommendations to government agencies on a range of topics, including wind farm permit conditions, planning processes, peer reviews and audits of expert reports, procedures for handling compliance allegations, overall governance arrangements and clarity of the responsible authority for wind farm compliance matters.

As a result of these efforts, a number of government departments and agencies have implemented and continue to consider recommendations made by the Office. Further detail on the Office's initiatives and reforms is discussed on pages 21-22.

The Office also provided advice and submissions on a wide range of guidelines, policies and processes, including:

- Australian Energy Market Commission *Coordination of Generation and Transmission Investment Discussion Paper*
- Australian Energy Market Commission *Integrated System Plan consultation paper*
- Australasian Fire and Emergency Services Authorities Council position paper on wind farms and emergency management
- Clean Energy Regulator accreditation and annual compliance return process
- New South Wales Government *Large scale Renewable Energy Guide for Farmers and Landholders*
- New South Wales Government *Renewable Energy Landholder Guide*
- Planning Panel Victoria Discussion Paper on the Land Use Terms Advisory Committee
- Victorian Government *Independent Inquiry into the Environment Protection Authority*, and
- Western Australian Government *Wind Farm Development Guidelines*.

In November 2018, the Commissioner facilitated the inaugural wind farm planning roundtable for the various state planning agencies across Australia. This forum provided an opportunity for the state based planning agencies to discuss issues and share updates, solutions and innovations. Agency representatives have agreed to meet at least annually to discuss progress and reforms and to work towards harmonised standards and processes where practical.

## **Universities and Experts**

The Commissioner has continued to liaise with experts and university researchers to understand their respective roles in providing advice and research regarding wind farm design, compliance testing and health effects. The Commissioner also consults with experts and researchers to assist in assessing and addressing issues and complaints.

In August 2018, the Commissioner presented to the Independent Scientific Committee on Wind Turbines, providing an update on the Office's activities, including complaint statistics and the Commissioner's 2017 recommendations. The Commissioner also met separately with some committee members during the year to discuss various observations and issues.

The Commissioner also maintains a watching brief on research being undertaken by two National Health and Medical Research Council (NHMRC) funded studies regarding wind farms and health. During the year, the Commissioner met with academics from Flinders University in Adelaide and University of New South Wales in Sydney to discuss updates in relation to the progress of studies. In December 2018, the Commissioner also met with the Chief Executive Officer of the NHMRC to provide an update and briefing of the Office's activities.

In September 2018, the Commissioner also provided two guest lectures to undergraduate and post-graduate engineering students at the University of Monash on topical issues in the industry and the importance of community engagement in the development and operation of wind farms.

### **Presentations and Events**

In addition to the community group events that the Commissioner has presented to (see page 16), the Commissioner has also formally presented to a variety of other stakeholder groups and forums. Events and meetings that the Commissioner presented to in 2018 include:

- Clean Energy Council Wind Industry Forum – March 2018
- Council of Rural Doctors – March 2018
- Grampians Region Stakeholders Briefing – March 2018
- Moorabool Shire Council – March 2018
- Noorat Community Meeting – March 2018
- Clean Energy Council Wind Directorate – April 2018
- Clean Energy Finance Corporation Board – July 2018
- Australian Clean Energy Summit – August 2018
- Solar Chief Executive Officer Round Table – August 2018
- Guest lectures to the Masters and Undergraduate Programs on Wind Energy and Resources Engineering (Monash University) – September 2018
- NSW Wind Industry Forum (Sydney) – September 2018
- Clean Energy Council Utility PV Directorate – November 2018
- State Government Wind Farm Planning Roundtable – November 2018, and
- Clean Energy Council Energy Storage Directorate – December 2018.

Public presentations are available on the Commissioner's website at [www.nwfc.gov.au](http://www.nwfc.gov.au).

### **Commissioner's Website**

The Office continues to maintain and update the Commissioner's website to fulfil its role as an easily accessible, independent and transparent source of information about wind farms. The website provides

links to a variety of information about wind farms and the wind energy industry, including information on wind energy generation, health, emergency management, planning authorities and compliance contact details.

The website also provides a wide range of information about the Office's activities and includes links to the Commissioner's presentations, bulletins and other publications including the previous Annual Reports. The website can be found at [www.nwfc.gov.au](http://www.nwfc.gov.au).

### **Initial activities related to solar farms and energy storage**

Since November 2018, the Commissioner's policies and online complaint form have been updated to reflect the expanded scope of the Commissioner's role. The Office is also in the process of updating the internal complaints management system and workflows. The Commissioner has also contacted a range of industry, community and government stakeholders to provide notification of the expanded role.

In order to identify areas for reform and improvements within solar and energy storage industries and government planning frameworks, the Commissioner has also undertaken the following preliminary activities:

- site visits and preliminary discussions with community groups in relation to specific solar farm proposals in New South Wales
- presentations and meetings with both the Clean Energy Council's Energy Storage Directorate and the Utility PV Directorate
- preparation of submissions for consideration into the Victorian Government's draft *Solar Energy Facilities Design and Development Guidelines* and the Queensland Government's *Queensland Solar Farm Guidelines*, and
- initial discussions with government agencies and the Clean Energy Finance Corporation to further understand the solar farm and energy storage project pipeline.

The Commissioner expects to include observations and recommendations relating to solar farms and energy storage in the 2019 Annual Report.

## REFORMS AND ADVOCACY

Throughout 2018, the Office undertook a number of initiatives and advocated for a variety of reforms based on recommendations outlined in the 2017 Annual Report as well as investigated complaints which highlighted systemic issues within planning frameworks and industry practices. Some of the reforms and advocacy undertaken by the Office in 2018 are outlined below:

- In November 2018, the Commissioner facilitated a wind farm planning roundtable for state planning agencies across Australia to discuss topical issues relating to the planning and assessment of wind farms. There were a number of best practices shared as well as agreement to work towards increased harmonisation of standards and approaches across the jurisdictions. Another subsequent planning roundtable is due to be held later in 2019.
- Following community concerns about the design, deployment and the potential for multiple wind farm transmission lines being deployed in a particular region, the Commissioner investigated the concerns and identified a number of systemic issues related to lack of planning and regulatory oversight. As a result, a number of material impacts had occurred, including visual amenity, inappropriate pole locations, road safety, lack of community consultation and the inability for the infrastructure to accommodate additional capacity from neighbouring wind farms in the region. The Commissioner's involvement led to a number of significant outcomes and reforms, including:
  - new planning requirements for transmission infrastructure to connect renewable electricity generators to the network
  - commissioning of a road safety audit of a newly constructed wind farm transmission line, resulting in a number of recommendations to improve road safety along the transmission route
  - an agreement to share transmission line infrastructure by two adjacent projects, setting an important precedent for industry cooperation in consolidating wind farm infrastructure moving forward
  - an agreement by another adjacent wind farm to underground their grid connection so to avoid duplicate overhead power lines along the same corridor
  - release of the Clean Energy Council's *Community Engagement Guidelines for Building Powerlines for Renewable Energy Developments*
  - development of draft Victorian Government practice notes for development of wind farm transmission lines, and
  - increased awareness of community concerns by industry and government in relation to the deployment and cumulative impacts of connecting transmission lines.
- Further to the Commissioner's recommendations regarding use of experts, the Victorian Government has introduced new noise assessment regulations for wind turbines to ensure that all predictive noise modelling assessments and post-construction assessments are audited by a Victorian Environment Protection Authority (EPA) accredited auditor. This new assessment process has subsequently been adopted within the Victorian Government planning framework in order to:
  - increase community confidence in the results of predictive noise assessments
  - provide increased assurance and integrity in the reliability of noise assessments for the developer and the responsible authority, and
  - minimise the potential of non-compliance post construction.

- After a voluntary adoption of the Commissioner's noise assessment process and audit, a wind farm developer advised they would operate a number of turbines in 'noise-curtailment mode' to ensure compliance with wind turbine noise standards and has agreed to provide ongoing confirmation that curtailment requirements have been implemented.
- In addition to predictive noise assessment and noise testing reports, the Commissioner has continued to advocate for improved oversight of other third party consultant reports, including independent audits, to ensure reliability of assessment reports such as Aviation Impact Statements, Environmental Impact Statements and Traffic Management Plans.
- Following concerns in relation to the cumulative impacts of several proposed wind farms in the region, Moyne Shire Council passed a motion in November 2018 to support the Commissioner's recommendations in relation to wind farm site selection, particularly in avoiding the cumulative impacts of multiple wind farms on communities in a specific area.
- The Commissioner has provided ongoing guidance to local government agencies to implement appropriate procedures for handling complaints received about nuisance allegations related to wind farms, such as provided for in the *Public Health and Wellbeing Act 2008* (Victoria).
- After a number of complaints had been received in regard to an aviation impact assessment, the Commissioner worked with the proponent to help ensure that the appropriate Aviation Impact Statement for a proposed wind farm was prepared to a level acceptable to be reviewed by the Civil Aviation Safety Authority (CASA). Following its review, CASA advised that the wind farm, as proposed, presented an unacceptable air safety risk.
- The Commissioner has worked closely with a number of wind farm developers to recommend appropriate visual impact mitigation screening solutions and approaches for residences near wind farms.
- Following a range of issues raised with the Commissioner, the Office has engaged with industry and government agencies regarding the logistics of transporting turbine components from port to project site. This has become a significant area of delay and concern for both industry and communities due to the large number of projects that have (or are about to) commenced construction with considerably increased size of turbine components.
- The Commissioner has worked with a number of wind farm developers to review and provide advice for best practice internal complaint handling procedures, including advocating for increased transparency and consistency with Australian standards.
- The Commissioner has worked closely with a range of emergency management agencies, including the Australasian Fire and Emergency Services Authorities Council (AFAC), to present guidance on risk avoidance measures and emergency management procedures for wind farms in the event of bushfires. These efforts have included providing substantial support in updating AFAC's position paper on wind farms and bushfire operations as well as a presentation by the Commissioner to AFAC's Rural and Land Management Group on emergency management learnings.

## UPDATED OBSERVATIONS AND RECOMMENDATIONS

In the Commissioner's 2016 and 2017 Annual Reports, the Commissioner made a number of observations and recommendations regarding the wind farm industry, largely based on experiences from handling complaints received and engagement with relevant stakeholders. These observations and recommendations covered a broad range of topics, including areas for potential improvement in the planning, governance and operation of the wind energy industry.

These observations and recommendations have received significant feedback from stakeholders. Much of the feedback was very supportive and aligned with the recommendations, constructive feedback was also received that suggested further refinements and clarifications. Many recommendations have been duly considered by the relevant stakeholders and a number of the recommendations were implemented and adopted in 2018.

The following sections are based on the 2017 report and have been further updated to include additional observations made during 2018 in handling complaints and undertaking various stakeholder meetings, as well as incorporating feedback received on the 2017 report. For consistency, the 2018 report has utilised the same topic areas and numbering system employed in both the 2016 and 2017 reports.

A number of the Commissioner's 2017 report recommendations were implemented during 2018 or are in the process of being implemented. As always, there may also be other approaches to achieve similar outcomes that are intended by the recommendations.

The recommendations below are for consideration by the relevant stakeholders. The Commissioner has no formal powers to mandate the implementation of these recommendations. That said, the Commissioner looks forward to the ongoing adoption of the recommendations in a manner that will enable continuous improvement within the wind industry.

Finally, as noted in previous annual reports, the large-scale wind energy industry is still relatively new in Australia, with the first major wind farm developments commencing in the early part of the last decade. However the industry is developing rapidly, with a significant acceleration in new developments over the past few years and in the coming future. A significant number of opportunities still exist for improvement in the governance and operation of the industry.

With regard to large-scale solar and energy storage, the Commissioner will formulate observations and views during 2019 and provide inaugural recommendations in the 2019 Annual Report. However, many of the recommendations detailed below would also be applicable to solar and storage projects.

### 1. Host Landowner Negotiations

#### 1.1. Observations

##### Background

Wind turbines are typically located on cleared primary production land owned by a landowner, often referred to as the 'host' landowner. The land's existing use is typically for broad-acre agricultural production (for example, livestock or cropping) and, in general, a relatively small portion of the productive land is utilised for the wind farm's operation, such as turbine siting, access roads and other related assets such as transmission line easements, electrical substations, transformers and meteorological masts. The landowner continues to operate the agricultural production activities on the remaining land. There is typically significant disruption during the turbine construction phase and ongoing access to the wind farm assets will be required by the operator during normal operations.

## Landowner Compensation

Host landowners are generally compensated on a fixed amount per turbine per year under a long-term agreement that mirrors the life of the wind farm – a term of 25 years is common. The fee paid to the landowner may be a flat annual fee per turbine, regardless of size or capacity, or a fee based on the generating capacity of the turbine. The latter arrangement reflects the reality that modern day turbines have much greater capacity (in the order of 4 MW-5 MW) compared with turbines available previously and, therefore, can result in less turbines being hosted by the landowner than originally envisaged with smaller capacity turbines.

An issue that has emerged relates to agreements that may have been entered into a number of years ago with a fixed annual fee per turbine, where the turbine capacity may have been in the order of say 1.5 MW to 2 MW. Some agreements did not contemplate the significant change in turbine capacity that has occurred in recent years. As a result, the agreement fee payable to the landowner (based on the smaller capacity turbine) may not reflect the fee that may be more appropriate for say a 4 MW to 5 MW capacity turbine. Landowners may wish to check their existing agreements in this regard as well as ensure new agreements have provision to adjust the fees in the event of capacity increase and the ability to escalate fees for changes in indicators such as CPI.

There can also be a variety of arrangements regarding when the payment of fees commence and end. While this is a matter for negotiation between the developer and the landowner, it would appear that a fair and reasonable approach would be for payments to commence no later than the start of project construction and cease no earlier than the completion of decommissioning and restoration at the landowner's property.

Other fee arrangements/agreements may also be required for transmission easements, road access, transportation of blades and towers across property boundaries, location of substations, location of project offices and the like. Landowners for these arrangements may or may not be turbine hosts.

An emerging issue is 'blade trespass', where a blade may need to traverse a landowner's property as it is transported around a corner. The recent increase in blade lengths has increased the possibility of this occurring. Developers need to be cognisant of this issue and ensure they have appropriate agreements in place with landowners prior to submitting any transport management plans.

## Development Process

Potential host landowners are typically approached by a developer very early in the development phase of a wind farm project to obtain their agreement to host turbines in the event that the project goes ahead. Landowners will typically enter into an initial agreement (often referred to as a 'License Agreement') that documents their willingness to host turbines and the commercial arrangements that would occur in the event that the development proceeds. Generally, these initial agreements provide the developer with exclusive rights over the landowner's property for a defined or undefined period of time.

There is a wide array of developers active in the industry, with a variety of skills, resources, experience and business models. Many developers will develop the project to a stage where it is eligible to secure (or has secured) a planning permit, and then sell the project to another entity to take the project forward. Currently, developers are not licensed to prospect wind farm projects nor do they require approval to prospect a location for a potential wind farm site.

As the development process progresses, it is not uncommon for a developer to propose more turbines than will be finally approved or installed. As a result, the developer often seeks and enters into preliminary agreements with landowners who may ultimately 'miss out' on hosting turbines or be asked to host a reduced number of turbines. Further, even once the final number of turbines is confirmed, the planned locations of turbines may be adjusted which can also result in landowners hosting less turbines than expected.



There are many reasons why a proposed wind farm may reduce the number of turbines during the development phase. These may include increases in turbine capacity, transmission constraints, environmental and planning considerations and requirements, financial constraints along with changes to policy, legislation or planning guidelines.

These various scenarios, observed in the Australian industry to date, can create a ‘winners and losers’ situation for landowners that may have had expectations of hosting wind turbines. For instance, a landowner expecting to host say 10 turbines (and expecting to receive the compensation associated with such hosting) may become aggrieved if the final approved wind farm has significantly reduced or eliminated the number of turbines to be hosted, thereby significantly reducing or eliminating the potential income stream to that landowner.

The landowner not only may miss out on a significant expected income stream, but may also experience many of the potential impacts of turbines located on neighbouring properties, including changes in amenity, audible noise, construction disruption and other effects of the wind farm. The fact that the landowner’s neighbours were still successful in hosting turbines and receiving compensation can further aggravate the situation for the landowner that missed out.

This situation can also be exacerbated by developers conducting confidential, individual discussions and negotiations with specific landowners, creating a level of distrust amongst neighbouring landowners and the developer from the outset.

The consequences of these scenarios can be severe, both in terms of fracturing support for the wind farm within the community as well as dividing the community in economic and social terms. Developers need to be mindful of the consequences arising from their conduct in landowner negotiations and the magnitude of impact on landowners with regard to changes in the number of turbines and turbine layouts.

There is also a high risk that wind farm prospectors, who may not have fully considered such scenarios and/or may not be invested in the long-term benefits of community engagement, conduct themselves in a manner that result in long-term resentment within local and wider communities where the project is proposed. While these actions may lead to difficulties in relation to the success of the specific project, they also have the potential impact of creating difficulties for other wind farm developers who may be undertaking development of neighbouring projects in the region. Ultimately, these scenarios have brought and still have the potential to bring the wind farm industry into disrepute.

In cases where landowners have ‘missed out’ on turbines after a lengthy period of time of being involved with the project, the Commissioner has observed some successful methods of working with such landowners, including a level of compensation that may be based on a range of parameters, such as taking into account the number of turbines that the landowner had been expecting to host.

### **Host Agreements**

A host landowner agreement is essentially a commercial lease. Significant time and money is spent by developers in creating draft landowner agreements, which in turn need to be reviewed by the landowner and their solicitor before executing. Both industry and landowners may benefit from a standard agreement document being produced and available for use that is fair and reasonable, complete and consistent with the relevant laws – similar to in concept, as an example, the Victorian Law Institute Commercial Lease.

Some landowner agreements observed could be clearer in a number of aspects. Agreements should provide clarity on a wide range of day to day matters, including which party is responsible for paying rates, land taxes, emergency services levies and the like. The landowner agreement also needs to be clear on termination provisions and the responsibilities regarding decommissioning of the wind farm.

Landowner agreements are not limited to hosting turbines – they may also be required to allow easements for high voltage transmission corridors, substations, construction facilities, meteorological masts as well as construction and operational access roads for the wind farm. Careful consideration of the approach and fairness to negotiating these additional agreements should also be required of the developer. Landowners should also ensure they seek suitably qualified legal and financial advice before entering into any agreement.

There may also be innovative opportunities for landowners and other community members to have an ownership stake in the project, which could be in the form of a community-owned wind farm through to equity or debt participation in the commercial ownership structure. It is understood that there are some examples of these approaches in Australia as well as in other overseas jurisdictions such as Europe.

### **Construction**

The construction period can be a time of significant disruption for the landowner, with potential long-term effects. Typical issues can range from management of gates – gates being left open during construction activities can quickly lead to unplanned migration of livestock, often with significant consequences – through to the impact of new roads being built throughout the landowner’s property. In particular, road construction in hill and ridge terrain may lead to large roadway cuttings and embankments that make it difficult to move livestock around the remaining paddock areas. Best practice gate management is to design the road access and fencing in such a way to minimise or eliminate the need for gates. Project roads should also be designed to minimise the need for ‘cut and fill’ and vegetation removal, using the natural landscape wherever possible.

A project typically has multiple contractors and subcontractors. It is not always clear who the landowner should contact to resolve issues as they inevitably arise during construction. Developers should ensure there are clearly defined points of contact for the landowners to raise and resolve issues during construction, as well as the ability to escalate concerns that are still unresolved.

### **Outgoings**

The addition of a wind farm to a rural property is likely to incur increases in outgoings such as Council Rates, Land Taxes, Insurances and other levies. For instance, a landowner may not be aware that primary production land may be re-assessed as industrial use land once turbines are installed, and may attract increased valuation rates and may no longer be exempt from land tax. As discussed earlier, landowner agreements should be clear on which party is responsible for payment of outgoings and any increase in the outgoings due to the wind farm. Ultimately, the landowner is usually liable for the payment of outgoings in the event the wind farm operator defaults.

Approaches to calculate and levy items such as council rates, land taxes and other levies appears to be ad-hoc across various state jurisdictions. This may result in a number of consequences, including revenue leakage and surprises in unforeseen levy charges. Some actions are being taken on these matters, such as the recently released NSW Valuer-General policy *Valuation of Land Used as a Wind Farm* (New South Wales Government, May 2017) but there may well be opportunities for tighter and repeatable processes to correctly calculate, levy and collect these payments as a result of the deployment of wind turbines on the land.

### **Decommissioning**

At the end of the wind farm’s operating life, the clear expectation of all stakeholders is that the wind farm will be decommissioned and all turbines and other infrastructure will be removed from the property and the property returned to its original condition to the extent that can be done.

These responsibilities to ‘make good’ rest with the wind farm operator. However, in the event of default by the wind farm operator, the liability for decommissioning ultimately rests with the landowner. Further, the landowner typically does not have title or ownership of the wind farm’s assets and, as a result, is

unable to recover the costs of any decommissioning activities by selling the assets remaining on the property. Wind farm operators/owners may also change many times during the life of the wind farm.

From a landowner's perspective, it is imperative that any commercial agreement to host wind turbines and infrastructure clearly sets out the responsibilities for decommissioning and restoring the site. A landowner may also wish to seek ongoing evidence that the wind farm operator has the capacity to fund the decommissioning activity and that such funds are properly set aside securely for that purpose. Examples that could be considered include bank guarantees, a sinking fund, a trust fund or a deposit held by the landowner.

It should also be noted that we are entering a period where, for some of the initial wind farm projects around Australia, decommissioning activities will commence in the next few years and there will likely be increased attention in how these activities are handled.

## 1.2. Recommendations

- 1.2.1. The developer should ensure that landowner expectations are properly managed from the outset of negotiations and that potential host landowners are made fully aware of the risks of potential reduction in turbines and relocation of turbines during the long development process life-cycle. Agreements that enable the developer to have the exclusive rights to the landowner's property should have fair and reasonable provisions for the landowner to terminate the agreement if the project has not met expected milestones after a reasonable period of time. Prospective milestones set out in the agreement should have clearly stated expected dates for events such as submission of permit application, financial close, commencement of construction works and expiry of permit.
- 1.2.2. Where practical, developers should consider discussing the proposed project and negotiating with all potential host landowners together as a group in an inclusive and holistic manner, rather than individual discussions with landowners. A standard template agreement with consistent commercial terms should be considered by developers and supported by industry.
- 1.2.3. Further to Recommendation 1.2.2, developers should consider offering some level of compensation to all engaged potential host landowners if the project proceeds, regardless of final allocation of turbines on individual properties.
- 1.2.4. Host landowner agreements should be fair and reasonable, be written in plain English and the landowner should have access to and obtain appropriately skilled legal and financial advice before entering into any agreement. The New South Wales Government's *Wind Energy Guideline for State Significant Wind Energy Development* (New South Wales Department of Planning, December 2016) provides some discussion on this topic, particularly within Attachment B of the publication. NSW Farmers' Federation have also produced a *Wind Farm Guide for Host Landowners* (GHD Pty Ltd, 2012) covering a range of relevant topics related to host landowner agreements. Specific areas of agreements requiring clarity in landowner agreements include:
  - fees payable to the landowner during the project development stage (pre-permit), financial close stage (post-permit), construction, operational and decommissioning stages
  - timing of payment of fees and due dates for payments
  - escalation of fees during the agreement, such as a fixed annual increase or CPI increase
  - considerations if the project is cancelled or materially delayed

- variations to fees in the event of changes to turbine layout, turbine specifications, turbine capacity and number of turbines to be hosted
- changes to and effects of project infrastructure to the landowners property (e.g. access roads) and responsibilities for maintenance of such infrastructure
- responsibility for payment of additional council rates levied on the landowner as a result of the wind farm
- responsibility for payment of additional land taxes levied on the landowner as a result of the wind farm
- responsibility for payment of additional emergency services or other levies as a result of the wind farm
- required insurances to be taken out by the wind farm operator in respect of the landowner
- required insurances to be taken out by the landowner in respect of the wind farm
- responsibility for payment of the various insurances
- landowners responsibilities in regard to renting out the property and/or residence(s) to a tenant
- sale or transfer of the land by the landowner
- any restrictions on further development on the property
- provisions in the event of subdivision of the property
- term of the agreement, options for renewal of the agreements and termination provisions
- assurance provisions in the event the wind farm defaults (such as deposit or bank guarantee)
- decommissioning provisions, responsibilities of the parties and arrangements to ensure funding is assured and protected
- remedies available to the landowner in the event of default by the developer, and
- key contacts at the developer for the raising and escalation of issues and potential breaches of agreement.

The above items could be set out in a standard template of a commercial agreement that is managed and maintained by an appropriate legal, industry or government body.

- 1.2.5. Councils and state jurisdictions should examine and audit current processes in place for the re-rating of properties that host wind farm turbines and related infrastructure and how those properties are valued for the purpose of calculating land taxes and council rates. A similar activity should be undertaken for the calculation of emergency services levies where applicable. The process and calculations should be transparent to relevant stakeholders and be subject to audit and be auditable.
- 1.2.6. Other landowner agreements (such as agreements for transmission line easements or road access) should also be negotiated and finalised with the landowners in a fair and reasonable

manner, with appropriate consultations engaging affected landowners and neighbours in determining the final approach and routes to be taken.

- 1.2.7. In certain situations, developers may wish to consider other forms of engagement with landowners (as well as neighbours and community members) that may allow for equity and/or debt participation in the ownership of the project.
- 1.2.8. The project's construction plan, transportation plan and wind farm design should be developed in close consultation with the landowners and designed so to respect the landowner's need to be able to continue primary production operations during and following construction. Particular attention should be given to paddock/gate management and the impact of access roads to ongoing farming activities. Key contacts at the developer and/or its contractors should be provided to landowners to allow landowners to raise and escalate issues that arise during construction. Developers should also meet regularly with landowners during construction to discuss and resolve issues and keep landowners informed of the project's status.
- 1.2.9. To ensure that professional conduct and standards are consistently adhered to by wind farm developers, state governments should consider licensing or accrediting developers that intend to prospect and develop wind farms. Further, as is the practice in the mining and exploration industries, state governments should consider the requirement for a developer to obtain a prospecting permit prior to commencing a wind farm prospecting activity in a given location. The prospecting permit could be time-limited and cancellable if certain milestones are not achieved.

## 2. Neighbour Consultation and Agreements

### 2.1. Observations

#### Background

Most wind energy projects will have neighbours. Neighbours are residents or owners of the neighbouring properties next to the host landowner's properties that host, or will host turbines, either in adjoining properties or properties within proximity to turbines of the wind farm. There may also be neighbours that are not in direct proximity to the wind farm that could be affected by other related wind farm infrastructure, such as high voltage power lines and road access to the wind farm.

Neighbours may also include functional facilities, such as an airfield, where a proposed wind farm could have significant impact on the ongoing operation and safety integrity of the facility.

Neighbours can be impacted by the development, construction and operation phases of a wind farm. Impacts can include visual amenity, noise, shadow flicker and economic loss – both the fear in anticipation of these impacts as well as actual impacts once the wind farm is operating. Also, during construction, neighbours may experience abnormal levels of dust, noise, road damage, road blockages and other forms of disruption.

#### Consultation

While developers have generally engaged and consulted with potential host landowners, developers have not always understood the importance of consulting and working with neighbours in proximity to a wind farm project. A common complaint the Office has received from wind farm neighbours is that they were not consulted by the wind farm developer. Often there is limited evidence to confirm the level of consultation and interactions between the developer and neighbours.

Consultation may include a wide range of topics, such as:

- consulting with neighbours on the wind farm’s design and layout, especially during the early scoping and design stages, enable a fact-based discussion about landscape/amenity impacts
- consulting with neighbours on the process and oversight of activities such as predictive noise assessments, post construction noise testing, environment, aviation, shadow flicker and visual amenity assessments
- advising and consulting on subsequent proposed changes to the wind farm’s design, layout and turbine selection
- ensuring background and operating noise testing is properly undertaken and results are provided in a timely fashion and appropriate format to neighbours
- providing factual information to address questions and concerns raised by neighbours, and
- facilitating site visits for neighbours to existing operating wind farms to allow the neighbour to experience a wind farm first-hand. Alternately, wind farm noise simulators are available to enable neighbours and other stakeholders the opportunity to experience noise outputs of a wind farm in a wide range of scenarios.

Lack of effective consultation with neighbours can lead to a range of material issues for a wind farm project, including conspicuous opposition to the project and any modifications to the project, formal objections that may lead to planning/approval delays and appeals, the project (or elements of the project) not being approved as well as widespread negative media coverage about the project and the industry more broadly.

### **Neighbour Agreements**

In addition to more effective consultation with neighbours throughout the life-cycle of a wind farm’s development, some developers have introduced the concept of ‘neighbour agreements’. These agreements can provide a commercial arrangement between the wind farm and neighbour that recognises the possible impacts of the wind farm on the neighbour and to gain the neighbour’s support. Agreements may also be mandatory to gain a permit approval in the event the neighbour is at a risk of experiencing impacts from the wind farm in excess of permit/standards limits or resides within a default setback distance zone.

The content of a neighbour agreement is typically confidential to the parties, but may include one or more of the following:

- annual compensation payments to the neighbour for the life of the wind farm (including payments during the development, construction and operating phases of the wind farm)
- a one-time payment at the commencement of the agreement
- reimbursement of reasonable legal fees incurred by the neighbour for the review of the agreement
- reimbursement for, or provision of, items such as visual screening, insulation, double-glazing, air-conditioning, energy efficiency programs, solar panels, electricity consumption
- an option for the neighbour to request that the developer acquire the neighbour’s property, and
- ability for a neighbour to terminate an agreement without penalty.

There may be a requirement for neighbour agreements to be offered and established as a result of planning permit conditions (generally due to proximity within prescribed default setback distances), which may prescribe mandatory components to the agreement. However, most neighbour agreements are voluntary and it is up to the developer to propose and negotiate such an agreement with the neighbour. Some wind farm developers have voluntarily developed neighbour agreement payments based on a formula of distance from a residence to the turbine(s) and the number of turbines located within that distance.

The Office has observed some proposed neighbour agreements contain clauses that may not be fair and reasonable to the neighbour. Such clauses observed include the right for the wind farm not to conform to the permit conditions that would normally apply to the neighbour (including noise levels and shadow flicker), the ability for the wind farm to terminate the agreement while the wind farm is still operating without cause and/or with questionable cause as well as clauses that could be construed to restrict the neighbour's right to make a complaint.

Further, some neighbour agreements seek to impose stringent planning restrictions on the neighbour for any new development or construction on the neighbour's property. The Commissioner's view is that these clauses are unnecessary and the neighbour should simply be required to comply with the planning rules and laws of the jurisdiction.

Inclusion of perceived unfair clauses by the developer can significantly impair the ability to negotiate a fair and reasonable agreement and create distrust and anxiety amongst neighbours towards the wind farm's proponent.

Similar to host landowner agreements, all parties may benefit from a standard template agreement for 'neighbour agreements' that is established and maintained by an appropriate body and available for use by industry.

## Visual Screening

Screening of the visual impact of the wind farm by planting trees is often proposed by developers to wind farm neighbours and may also be a mandatory requirement of the permit. A common issue is the length of time for a newly planted tree to grow to provide sufficient screening, bringing into question the effectiveness of such mitigation. It should be noted that Appendix 2 of the New South Wales Government's *Visual Assessment Bulletin* (NSW Department of Planning, 2016) outlines a range of potential mitigation measures that may be applied.

Further, the process of conducting visual screening assessments and designing and implementing the program can be a significant task and results of the program may not meet perceived expectations. An alternative approach is to provide the neighbour with the option of taking a cash payment in lieu of the screening program, thereby empowering the neighbour to decide how best to apply the funds to address the situation. This approach can also alleviate potential difficulties within a community, for instance if some residents have already, proactively, planted trees of their own accord and may now not be eligible for screening assistance.

## 2.2. Recommendations

- 2.2.1. Developers of wind energy projects should, where practical, proactively identify all potential neighbours at the commencement of the development activity and implement an effective, ongoing consultation program with all contactable neighbours throughout the project's development. While it may vary by project and geography, neighbours affected may include residents and landowners in a proximity range of 0 km to 5 km from potential turbine locations as well as residents in close proximity to other wind farm related infrastructure, such as power transmission or supply infrastructure. This indicative distance range for consultation may need to be greater in situations where, for instance, turbines are proposed to be erected on an elevated ridge.

- 2.2.2. Key stakeholders to a developing wind energy project (for example, project buyers, planning authorities, investors, debt providers, local councils, regulators) should seek and consider evidence of neighbour identification and effective neighbour consultations as part of any due diligence and approval criteria.
- 2.2.3. Developers should consider the merits and use of appropriate neighbour agreements as a potential component of its overall neighbour and community consultations and project strategy. If utilised, neighbour agreements should be negotiable, fair and reasonable, written in plain English and the neighbour should have access to and obtain appropriate legal and financial advice before entering into any agreement. Standard agreements should not restrict the neighbour from being able to raise issues and concerns about the wind farm, including subsequent proposed changes to the wind farm's design. Neighbours should be able to make complaints about the wind farm and not be subjected to conditions that exceed normal planning standards and permit requirements. There may be existing, operating wind farms where a retrospective neighbour agreement should be considered. Developers may, alternately, opt for a broader community support model that benefits a wider group of community members that may not include specific neighbour agreements.
- 2.2.4. Screening solutions proposed by developers should be realistic and effective. If trees are proposed, trees should be planted in a timely fashion and well maintained to provide effective visual screening within a reasonable timeframe. Other screening solutions, such as structures or shutter blinds, should also be considered when proposing and negotiating a visual screening agreement. Neighbours may also prefer a cash payment option in lieu of the developer designing and installing the screening solution.
- 2.2.5. The developer should recognise that some neighbours may have been potential host landowners for the initial project's design and should take the time to understand the neighbour's history of involvement with the project. Developers should document all conversations and interactions with neighbours and maintain such records in an appropriate system for future reference. Equally, neighbours who have been approached by developers to offer an agreement should ensure that they have documented all offers and agreements presented to them for future reference.
- 2.2.6. Neighbours should be appropriately represented in any project related committees, such as Community Consultative Committees and Community Engagement Fund Committees, to help ensure that neighbours have a voice, as well as the opportunity to be positively engaged with the many and various aspects of the project across the community.

### 3. Community Engagement

#### 3.1. Observations

##### Background

Effective community consultation and engagement is essential for wind farm projects to gain widespread support and earn the 'social license' to operate within the community. To be effective in community engagement, it is vital to actually 'engage the community' and involve the community wherever possible in the design and execution of programs related to the wind farm.

The level of community engagement by developers varies widely across the wind farm projects observed to date. A key observation is that initial project developers that intend to 'on-sell' the project to a long-term developer or operator may not invest sufficient time and resources in community engagement or neighbour relations to be effective. These limited efforts can result in lower levels of community support and more divided communities, compared with projects where the project developers appropriately focus on effective community engagement from the very start of the development activity.



## Community Committees

In some jurisdictions, such as New South Wales, the planning guideline framework has provided for an early and continuing focus on community engagement, including the establishment of a Community Consultative Committee (CCC) that is maintained throughout the life of the project. Further, recent feed-in tariff arrangements established by the ACT and Victorian Governments, place a significant weighting on selecting developers/projects that have proposed and demonstrated effective community engagement programs and subscribe to community engagement as a high priority.

Many projects also establish Community Engagement Funds, funded by the developer, to fund a wide range of initiatives that benefit the local community. In some cases, such funds are a condition of the permit approval, but largely these are voluntary arrangements proposed by the developer.

## Communications

The quality of and information provided by wind farm websites vary from project and/or developer. In general, there is more work to be done by developers to provide up-to-date websites with clear transparency of information about the developer, the project, how and who to contact in the organisation, how to make a complaint and access the complaint process procedure – along with access to all relevant project documents. Some project websites are also difficult to find or do not exist.

## Coordination

Some regions of Australia are experiencing increased clustering of proposed and approved wind farms which may result in multiple wind farms infiltrating and ‘surrounding’ communities. As a result, there is both the need and opportunity for individual project developers to communicate more effectively with each other and better coordinate engagement with the affected community. This could range from combined initiatives by wind farm developers through to coordination of construction programs in order to minimise cumulative impacts on residents and townships.

Developers should also be aware of other key infrastructure projects that may be taking place in a region and ensure that project schedules are planned and coordinated to minimise impacts to communities.

## Guidelines

During 2018, a number of community engagement publications were issued or updated, including publications by the Clean Energy Council and the Victorian Government. These are very useful resources to assist developers prepare and execute effective engagement programs. Community engagement plans are now also required in some planning permits as a prerequisite condition.

Overall, there continues to be a wide range of opportunities for developers to further broaden and improve community engagement with respect to wind energy developments. A number of suggestions gained from observations of various practices across the industry are listed below.

### 3.2. Recommendations

- 3.2.1. The developer should ideally commence and invest early in community engagement – well before the commencement of the permit approval phase. An acquirer of a project still in development should conduct detailed due diligence on the extent and effectiveness of community engagement activities undertaken by the previous developer prior to finalising purchase of the project and be prepared to make the necessary investments in community engagement going forward.
- 3.2.2. The developer should proactively identify and establish effective working relationships with key community stakeholders, including stakeholders that may be opposed to the project.

- 3.2.3. The developer should, in consultation with the responsible authority and the community, consider establishing a CCC (or equivalent) with an appropriate charter and membership (noting that in some jurisdictions, a CCC may be mandated). The CCC Chair should, where practical, be a respected and representative member of the community at large as well as independent of any direct impact or beneficiary of the proposed wind farm. Ideally, the CCC should meet monthly during critical stages of the project's development, approval, construction, post-construction testing and initial operations.
- 3.2.4. Many developers provide a range of information and education opportunities for community members to better understand the benefits and impacts of wind farms as well as address any questions and concerns raised. Initiatives to consider include:
- establishing a 'shop front' in the community town centre that provides project/permit information, a map and model of the project, information about wind farms and an ability to address questions or concerns raised by community members
  - providing an informal channel for community members to ask questions and provide feedback about the project, and be able to do so anonymously if required
  - providing opportunities for community members to visit operating wind farms
  - providing access to a wind farm noise simulator to demonstrate wind farm noise to community members and enable them to experience simulated noise scenarios
  - maintaining an easily found, up-to-date project website with full transparency on contacts, complaint process, project details, the project's current status along with planning permit details and documentation
  - briefing local members (federal, state and local government) on the project and providing them with timely updates and information
  - developing effective relationships with local media and providing the media with factual information to assist their reporting of the project and any impacts
  - providing information sessions about the project and wind farms more generally, at convenient locations for community members, including presentations from key stakeholders, along with regular project newsletters and updates, and
  - publishing the minutes, where applicable, of CCC (or equivalent) meetings and allowing observers to attend CCC meetings.
- 3.2.5. The developer should establish a formal complaints/enquiry process, including a system to record and manage complaints, as well as provide a transparent register of complaints/enquiries information (note: actual complainant details can be masked for privacy). The complaints process should ideally commence at the initial stage of the development activity to allow community members to formally raise concerns and have those concerns addressed in a timely, consistent and transparent manner.
- 3.2.6. The developer (and CCC if it exists) should consult widely and communicate effectively and extensively on the proposed construction and related transport plan. The developer should also ensure appropriate restoration and 'make-good' actions are in place to remedy damage that may occur and seek, where practical, to leave local infrastructure in the same or better condition than prior to the construction. The developer should also proactively provide communications during construction using all forms of relevant channels, such as text messaging, to advise community members of impactful activities. Where more than one construction project is occurring in the same area, collaboration should occur between the

projects to proactively identify and resolve issues, such as constrained supplies such as gravel, tradespeople, accommodation as well as road access issues.

- 3.2.7. Further to Recommendation 3.2.6, the developer may wish to seek out opportunities to help facilitate improvements to other related community/local infrastructure. Initiatives could include improving mobile phone coverage, utilising the 'imported' project workforce to help upgrade local facilities (such as parks, playgrounds) and other practical activities which could benefit the overall community for years to come.
- 3.2.8. Local council(s) should proactively engage with the project and community, clearly communicating the council's support for the project as well as its role in facilitating and promoting effective community consultation. Council should participate in any CCC or equivalent. If there are multiple wind farm projects located in a Council's jurisdiction, it would be advisable to appoint a Council liaison resource to coordinate relations and issue resolution between community and developers.
- 3.2.9. Where possible, the developer should engage staff locally (or locate them locally) to lead community engagement activities and respond to community concerns and complaints. The developer should also seek to hire local tradespeople and contractor staff where practical.
- 3.2.10. Once a wind farm is in operation, the developer should continue to proactively provide information and updates about the wind farm and provide opportunities for the community to visit the wind farm site (such as an 'open day').
- 3.2.11. The developer should consider establishing and maintaining a community engagement fund and ensure there is appropriate community involvement in the governance and management of the fund. In some jurisdictions, such a fund is mandated. The fund should allow for appropriate opportunities for community originated submissions to obtain funding for project proposals. Prioritisation of funded projects that may be of benefit to those community members more directly affected by the presence of the wind farm should be encouraged. The 'community' should clearly include and benefit community members that live in proximity to the wind farm rather than only supporting projects related to a regional centre. Developers may wish to consider providing offers for community members to become shareholders in the project, which can provide a practical sense of ownership within the community. Developers may also decide to offer deals on electricity costs, gift cards or other benefits to the local residents within the immediate community.
- 3.2.12. Stakeholders to the project, including the responsible authority, council, bankers, investors and regulators, should seek relevant evidence of both the project's community engagement plan and outcomes from the plan's execution as input to decisions or conditions the stakeholder may wish to place on the project and developer.
- 3.2.13. Industry bodies, such as the Clean Energy Council (CEC) and the Australian Wind Alliance (AWA), should continue to promote effective community consultation engagement and publically recognise those industry members achieving excellence in positive community engagement outcomes. Appropriate priority should be given to this topic when designing industry forum agendas.
- 3.2.14. State governments can continue to play a key role by prioritising the promotion of effective community engagement in wind energy projects. Examples include initiatives such as community engagement plans as a key selection criteria for eligibility to be awarded state government 'feed-in tariff' arrangements as well as utilising formal permit conditions to mandate preparation and endorsement of the plan.
- 3.2.15. Wind farm developers should ensure that all contractors and other project stakeholders are aware of their responsibility to engage well with the community and minimise community

impacts. If there are multiple infrastructure development projects occurring in a region, wind farm developers should also be aware of potential cumulative impacts to a community and should liaise with local councils and other developers to proactively plan ahead so to avoid or minimise unnecessary impact on the community.

#### **4. Planning Permits – Time Limits and Scope Changes**

##### **4.1. Observations**

###### **Background**

Once approved, a wind farm planning permit is typically granted for a period of around five years. The developer then has that period of time to fulfil and complete the various plans and assessments required by the permit to commence construction of the wind farm, consistent within the permit requirements and conditions. Invariably, the construction is not completed within this five year period (or even commenced), whereby the developer applies for an extension or renewal of the permit. There have been numerous cases of wind farm projects where the permit has been extended or renewed for further periods, often with changes to the wind farm's design due to the ongoing technological evolution of wind turbines.

###### **Elongated Time Frames**

As a hypothetical example, design and development activities for a proposed wind farm may have commenced in the 2001-2002 timeframe. In 2005, an approved planning permit with a five year expiry may have then been issued to the wind farm. If construction of the wind farm had not commenced or been completed by the time the approved permit expired in 2010, upon request by the developer, the planning authority may have then approved the permit to be renewed for a further five years until 2015, with the renewal approval usually based on some level of commencement of the project. If the wind farm construction was then completed in 2015, the results of post-construction compliance testing (such as noise-testing) may not be known until the 2016-2017 timeframe.

Therefore, it is feasible that a period spanning 15 years or more can occur between the original prospecting at the wind farm site and the wind farm being fully operational with post-construction testing activities and reporting complete.

Delays between the time of obtaining a permit approval for a wind farm and the actual commencement of construction works can occur for a variety of reasons. Typical reasons include undertaking and obtaining approval for the various reports and plans required by the permit prior to construction commencement, changes in turbine selection and turbine layout (which may be a consequence of issues uncovered by fulfilling the permit conditions), delays in obtaining financial close and changes in government policy.

These lengthy timeframes for a wind farm project are significant and can raise a number of issues for consideration, including:

- Standards, such as noise standards, may change over the course of the development process. For example, at the time of initial project development, the project and permit conditions may have been based on the NZS 6808:1998 noise standard. Although the standards may have been revised in the ensuing period, the project and permit will still be based on the 1998 standard, rather than the updated NZS 6808:2010 noise standard – even though the wind farm may have been built more than 15 years after the initial project's development and well after the more recent standard came into effect.
- Setback distances policies (the minimum distance between a turbine and a residence) can also vary over time. As an example, a number of Victorian wind farms with current, renewed permits have no default setback distance provisions as the original permit was approved in the previous

decade. Prior to 2011, there were no default setback distance requirements in Victoria. In 2011, a 2 km setback distance was introduced. The current default setback distance on Victoria is 1 km.

- Changes in standards and planning guidelines could therefore conceivably take many years from the time they are introduced to when they are written into planning permits for proposed wind farms.
- Technology, such as wind turbines, may also change over the project timeframe. The original project design and permit conditions may have been based on turbines of a certain energy capacity (for example, the original turbine may have been 1.5 MW, whereas the developer now wishes to deploy 4.5 MW turbines) with changes to physical size dimensions (for example, higher turbine hub heights and longer blade diameters). As a result, the developer may decide to take advantage of the new technology and propose to change turbine selection over time, potentially altering a number of material characteristics and impacts of the wind farm, including turbine layout, visual amenity, noise and shadow flicker. These changes will likely result in the need for a formal modification (or endorsement) to the planning permit, re-opening the wind farm to potential objections and community concerns about the proposed changes.
- An emerging issue in 2018 was the impact on transport routes and vegetation clearance due to the significant physical increase in turbine dimensions. The modification process may well reignite original debates and issues with the project, and add further delays to project start or completion. The transport plan also needs to be holistic and be carefully planned and mapped from port to project.
- The requirements on the developer to qualify for the ability to request a renewal of the permit for a further period may be minor relative to the total project scope (for example, the building of a simple shed or road access to the site) so to demonstrate some level of commitment to construct the project. These relatively minor works, when compared to the total proposed project, may be viewed as not substantial enough to warrant that the project has materially commenced within the permitted timeframe nor obligate the project in a way that it has no choice but to proceed.
- The community affected by the wind farm (including host landowners and neighbours) can be subjected to very long periods of uncertainty as to whether or not the project will proceed. This uncertainty can affect a range of individual landowner and stakeholder decisions as well as discourage or prevent other potential development within the wind farm's planning envelope.
- Community engagement may also not be sustained by the developer over long periods of uncertainty and may deteriorate during the elongated time frame.
- During an elongated development cycle, other wind farms may have been subsequently planned and/or constructed in the area, which may result in possible unforeseen cumulative impacts for nearby residents.

### **Precedence**

Depending on the jurisdiction, a developer may not need to take into account a dwelling that has not been constructed, even though the dwelling has a valid and current planning permit and building permit. In effect, the layout of a potential wind farm takes precedence over existing planned dwellings, resulting in the possibility of the planned dwelling being too close to turbines to meet noise limit and other setback requirements. It would seem reasonable to expect that a proposed dwelling that has proper and current permits in place needs to be considered as a dwelling for wind farm planning purposes, where the dwelling permits are already approved and in place prior to a wind farm permit application being submitted.

If the dwelling is subsequently not constructed and/or the permits expire, then the developer may choose to adjust the wind farm design accordingly.

Further, once a wind farm development is approved or constructed, persons wishing to build a dwelling or infrastructure within proximity of the wind farm should have their plans referred to the wind farm to check whether or not the dwelling is within compliance zones for matters such as noise and shadow flicker.

### **Other Infrastructure**

In some jurisdictions, planning permits are not required for transmission and other associated infrastructure to connect the wind farm to the grid. This lack of oversight can lead to a wide range of community issues related to the design, routing and installation of the transmission line and related assets. The prospect also exists for duplicative assets connecting each wind farm to the grid with no mandatory requirement to seek consolidation of such assets to minimise community impact and promote a more efficient use of capital.

## **4.2. Recommendations**

- 4.2.1. A wind farm planning permit should only be renewed for one further term as a maximum. Approval of permit renewals should require the developer to demonstrate the likelihood of the project commencing and being completed prior to the end of the requested/approved renewal period.
- 4.2.2. Requests for material changes to the wind farm's proposed design and technology need to be scrutinised through an appropriate and rigorous process by the responsible authority. The process should be transparent to all stakeholders and include re-assessments of key impacts such as noise, visual amenity, environmental considerations, shadow flicker and construction impacts.
- 4.2.3. The responsible authority should be able to reasonably introduce and apply current/updated planning guidelines, applicable standards and updated permit conditions when assessing a request to renew and approve a wind farm planning permit or modifications to the permit. For example, a developer seeking to renew a permit issued on 1 January 2015, expiring 31 December 2019, may be required to comply with any contemporary guidelines and standards currently in force that could be reasonably complied with and prepare the renewal submissions in accordance with those guidelines and standards.
- 4.2.4. Evidence of ongoing community engagement for the project should be submitted to the responsible authority when seeking a renewal approval or permit modification request. Submissions should include evidence of community consultation with regard to any proposed changes in the wind farm's design and layout subsequent to the original permit approval.
- 4.2.5. In considering a renewal or modification application, the responsible authority should assess any compounding effects of other proposed or constructed wind farms in the vicinity, in particular with respect to residents who may experience cumulative effects that may be exacerbated by the proposed wind farm that is seeking permit renewal approval.
- 4.2.6. Further to Recommendation 4.2.5, the responsible authority should assess and take into account any other planning approval requests/approvals in the vicinity that have arisen subsequent to the original permit approval when considering the wind farm's permit renewal application. These could include dwellings that had legitimate planning approvals prior to the wind farm's original permit being approved that have subsequently been built and are inhabited.

- 4.2.7. In the event that the wind farm is seeking a renewal/extension of the permit period to allow a commenced project further time for construction completion, the responsible authority needs to be fully satisfied that material construction has already commenced and provide extensions only for the period where it would be reasonably expected for the remaining construction to be completed.
- 4.2.8. Vendors selling properties within 5 km of a proposed and approved wind farm should be required, where practical, to disclose any such proposed wind farms to purchasers in contract of sale documents, based on information provided by the local planning authority. State governments should also include questions for rural property purchasers to ask about potential wind farms in any due diligence checklist that may accompany contract of sale documents.
- 4.2.9. Planned dwellings within proximity to a proposed wind farm, that have approved and current planning and building permits, should be treated as an existing dwelling when preparing and submitting wind farm permit applications. Planned dwellings that subsequently are not constructed, or have expired permits, can be removed from the wind farm planning layout as a constraint. See also recommendation 4.2.10 regarding development plans subsequent to a wind farm planning permit being approved.
- 4.2.10. Neighbours to wind farm projects, where the project is in either development or in operation, should be allowed to submit development plans to the responsible planning authority for new development on their property, such as a dwelling or a shed. Development proposals within at least 1.5 km of a proposed or operating wind turbine, should be referred to the wind farm developer by the responsible authority for consultation and to verify impact levels of the wind farm at the proposed neighbour's development site. Development proposals in locations where the wind farm is likely to exceed prescribed standards and limits may require written agreements to be reached between the neighbour and the wind farm before the neighbour's development can be approved.
- 4.2.11. Transmission lines, substations and other related electrical infrastructure should all be subject to and require an appropriate and detailed planning permit, ideally as part of the overall permit for the project. Careful consideration should be given to the design and routing of the powerline. Proponents should collaborate wherever possible to optimise use of shared transmission facilities. Relevant governance bodies (transmission planning, electrical safety, road safety, local councils etc.) should be properly consulted on the project and exercise their oversight responsibilities accordingly.

## 5. Governance and Compliance of Standards and Permit Conditions

### 5.1. Observations

#### Background

The design and governance of wind energy projects relies on a range of standards and various compliance mechanisms to monitor and enforce those standards.

Standards are often set and maintained by the responsible authority (for example, a state planning department or environment department) and there are a variety of arrangements in place for enforcing compliance with the standards. Standards may be 'borrowed' from other jurisdictions (for example, Victoria uses the New Zealand Noise Standard, the NSW noise standard is based on the South Australian standard), set by the planning function or set by the state agency responsible for environmental management and regulation.

Enforcement of standards and permit conditions also varies by jurisdiction and the type of standards. Generally, there are no proactive audit regimes in place – rather, compliance relies on receiving

complaints or alleged breaches of permit conditions. The pathway to make a compliance complaint or allegation again varies by jurisdiction and type of complaint – in some cases the state environmental regulator can receive and investigate noise or environmental complaints about wind farms, in other cases it may be a local council, state planning department or the relevant Australian Government Department.

### Compliance Complaints

It is often unclear to community members where or who they should lodge a complaint to regarding wind farm construction or operating compliance. Planning permits may not clearly state the accountability and responsibilities with regard to compliance oversight, nor may they prescribe a process for handling potential or actual non-compliance. Further, local councils and state planning functions may not have the necessary skills and expertise to handle and investigate a compliance complaint. Federal agencies, such as the Clean Energy Regulator, rely on a clear understanding of the responsible compliance authority and the authority's advice if the Regulator is to consider acting on allegations of non-compliance or breach of a law.

### Interpretation and Consistency of Standards

Borrowed standards can also be difficult to administrate or enforce if a protocol has not been developed for the local jurisdiction. For instance, the New Zealand standard has a concept of low and high amenity areas for determining the appropriate noise limits for a wind farm. Victoria's planning scheme does not define such areas, making it difficult to interpret and apply the NZ standard 'as is' in the Victorian context (see *Cherry Tree Wind Farm Pty Ltd vs Mitchell Shire Council – VCAT – P2910/2012*).

Issues have also arisen regarding the application of tonal noise penalties provided for in the NZ standard. The application of the standard is open to interpretation in that regard, and Victoria must rely on interpretations from New Zealand court proceedings to attempt to clarify the standard. This can be a difficult matter to resolve, particularly in the event the interpretation has also been a topic of debate in the home country (see *Decision of Hearing Commissioners re Palmerston North City Council v New Zealand Windfarms Ltd – November 2017*).

Typical standards and permit requirements relevant to a wind farm's development and operation can include matters such as audible noise, shadow flicker, visual amenity impacts, setback distances, environmental matters related to flora and fauna, vegetation clearance as well as noise and dust levels during construction.

Standards relating to wind farms currently vary by state. For example, the wind farm noise limit standard in Victoria and Tasmania is 40 dB(A)\* measured outside the residence. South Australia varies between 35 dB(A)\* and 40 dB(A)\* based on the location of the wind farm, Western Australia is 35 dB(A)\*, New South Wales is 35 dB(A)\* and Queensland's standard is 37 dB(A)\* during the day and 35 dB(A)\* during the night. The approach to measuring the noise emitted from a wind farm can also vary by project and jurisdiction which can lead to debate over the veracity of the noise assessment results.

The World Health Organization's (WHO) latest noise guidelines recently recommended a 45 dB (Lden) limit for wind farm noise, measured outside the residence, to prevent negative effects on sleep and health. However, the report noted the lack of research or evidence available to conclusively support this new guideline limit. Previous WHO guidelines were based on an inside measurement limit of 30 dB(A), although it can be difficult and intrusive to carry out wind farm noise testing inside a residence, particularly over a long period of time.

\* or background noise plus 5 dB(A), whichever is the greater amount. Measurements of A-weighted sound pressure level are generally taken on the basis of LA90, 10min.



Current noise standards therefore rely on the effects of attenuation of the noise by the residence structure and would assume that a noise level of, say, 40 dB(A) measured outside the residence should be less than 30 dB(A) measured inside, based on an expected attenuation in the order of 10-15 dB(A). This attenuation may be greater if the windows are closed and the residence is of solid construction and well insulated, however, the effective attenuation may be less if windows are open and/or construction and insulation of the residence is less robust.

Issues can also arise where a wind farm is tested for noise and the result exceeds the limit by a marginal amount, for example 40.2 dB(A) against a limit of 40 dB(A). The Commissioner's understanding is that the 0.2 dB(A) difference would be undiscernible by the human ear and is the result of the complex mathematical calculations that assess multiple noise data points. There may be some merit in allowing for a small, reasonable tolerance level to avoid wind farm's unnecessarily being in technical breach of compliance.

Debate continues as to whether or not a low frequency standard should also be introduced, such as a dB(C) and/or dB(G) weighting. The prevailing argument to date is that the 'A-weighted scale' accommodates a sufficient proxy for low frequency noise and that low frequency noise can be difficult to detect at levels that would breach threshold targets. However, based on some complaints received, the possibility remains for annoyance for some people living in proximity to a wind farm and experiencing low frequency noises or vibrations while inside their residence. More work is still required to determine whether or not the noise or vibration source in question is the wind farm or some other source. The Office's complaint data has seen a reduction over time in complaints citing concerns about low frequency noise or vibrations.

The Independent Scientific Committee on Wind Turbines has derived a suggested wind turbine noise limit of 35 dB(A) (LA90,10min) to ensure minimal annoyance. This suggested limit approximately equates to an LA,eq,10 min of 37 dB(A) or an Lden of 43.4 dB(A).

### **Setback Distances**

A setback distance (also known as a 'veto' distance) is a default distance that, if a residence is within that specified distance from a proposed turbine, the resident can veto the turbine or come to some agreement with the wind farm developer to allow the turbine to be sited within the setback distance limit.

Setback distances from the turbine to a residence also vary across states. Victoria originally had no setback distance, then introduced a 2 km setback distance in 2011 and, subsequently, changed it to 1 km in 2015. Queensland has introduced a setback distance of 1.5 km, while the New South Wales framework is based on a merit assessment of each project against the criteria and performance standards in the framework. Western Australia is currently considering the Commissioner's recommendation of a 1.5 km setback. Turbines can be closer to a residence than the default setback distance, however typically require an agreement to be reached between the resident property owner and the developer.

Current setback distances have been predominately set based on legacy turbine dimensions and expected outcomes from noise standards. As a rough rule of thumb, a 40 dB(A) noise contour should be just less than about one kilometre, whereas 35 dB(A) noise contour should be just less than 1.5 km. Turbines predominantly installed during this decade have typically been at tip heights in the order of 150 metres and around 2 MW to 3 MW in capacity.

New projects are now proposing turbines with tip heights in excess of 220 metres and capacity of around 5 MW per turbine. Improvements in turbine design have mitigated the noise effects and, generally speaking, the noise contours have not materially changed for these larger turbines. However, there may well be effects of increased visual amenity and shadow flicker impacts that may give rise for a need to revisit current set back distances and increase them accordingly.

While setback distances are typically based on the distance from the wind turbine to the residence, there may also be circumstances where the distance of the turbine from the neighbour's property boundary should also be a consideration. Such circumstances could include the potential effect of wind turbines on animals such as horses, or other situations where turbines may impact neighbouring properties due to their proximity to land use activities on a property.

The British Horse Society recommends a setback distance of 200 metres from wind turbines to horses on the basis that horses can react to noise, blade rotation and shadow flicker impacts from wind turbines, as outlined in their publication *Wind Turbines and Horses – Guidance for Planners and Developers* (2015).

Upper Lachlan Shire's Development Control Plan specifies that turbines shall not be located within a distance of two times the tip height of a turbine from a formed public road or a non-involved property boundary. For example, a tip height of 150 metres would require a setback of 300 metres from a road or property boundary according to these guidelines (see '*Upper Lachlan Development Control Plan 2010*', page 93).

There may be other sources of noise as a result of the wind farm's operation, in particular noise that would emanate from the wind farm's electrical infrastructure, including power substations, transformers and back-up generators. The impact of such noise sources should be assessed during the design phase and tested for compliance during any post-construction noise testing.

Electrical infrastructure required for the wind farm, such as transmission lines, may also cause a change in visual amenity for community members. Consideration should be given for those impacts and setback distances as they may also be appropriate to mitigate visual amenity loss and noise issues arising from the infrastructure.

### **Harmonisation of Standards**

The opportunity exists for a clearer framework of standard setting and enforcement of standards, whereby there is independence in the setting and enforcement of standards from the planning function. Such independence allows for increased community confidence in the objectivity of setting standards and assessing compliance. It also allows the relevant independent agency to acquire and maintain the appropriate skills and expertise to fulfil its standards and compliance responsibilities.

The opportunity also exists for increased harmonisation of key standards across state jurisdictions, such as noise, visual amenity, shadow flicker and setback distances, providing a consistent approach and expectations for governments, industry and the community. Consistency across the states will not only provide a more equitable outcome for residents potentially affected by wind farms, but may also result in the additional benefit of driving improvements in the technology across the entire market based on the more stringent, while appropriate, standard.

While there may be a number of ways to address these issues, best practice appears to be assigning responsibility for the setting and compliance oversight of environmental-related wind farm standards with the state environmental regulator, while the application of the standards to specific projects rests with the state or local government planning authority. The current arrangements in place in New South Wales and South Australia generally reflect practices along these lines.

### **Deemed Compliance**

Finally, once a wind farm commences operations, it has not achieved formal compliance until all of the post-construction compliance testing has been completed and accepted. Typically, formal post construction testing, such as noise, can only commence once all turbines are operating. The testing itself may take up to 12 months to test and report. Therefore, there may be a period of two or more years where the wind farm is partially or fully operating, but is yet to be confirmed as compliant.

A wind farm may be 'deemed' to be compliant in some jurisdictions even though post-construction assessments have not commenced or been completed. There may be an opportunity to introduce more formal processes to properly clarify the deemed compliance period and then confirm when a wind farm is actually compliant once all of the required testing is complete – and the timeframes for which that must occur. This 'grey area' of uncertainty of compliance can cause a range of community concerns and also be costly for governing bodies, particularly for larger wind farms that may have a two year plus construction cycle.

Anecdotally, some wind farms have been described as being 'not non-compliant' when unable to confirm compliance with required permit conditions, highlighting the difficulty of declaring a wind farm to be 'non-compliant' when its default status is compliant. In addition, it may be appropriate to consider that a wind farm is deemed to be operationally compliant during the construction, commissioning and testing periods, but ongoing compliance is subject to final confirmation by the responsible or regulatory authority.

From the Commissioner's observations, one solution to this issue is for a wind farm to be licensed by the appropriate environmental regulator. Under this scenario, the wind farm would need to confirm and maintain its compliance with the applicable license and permit conditions or risk losing its license to operate in the event of unrectified material breaches of the license and/or permit conditions. The license conditions could include conditions to meet during the period prior to post-construction testing, particularly with regard to handling abnormal or mechanical noise issues.

Measurement approaches for measuring compliance with the standards can also vary between projects and jurisdictions. Given the extraordinary number of variables to be measured, consideration needs to be given to the consistency of measurement, calculations and reporting for assessing environmental measures such as noise and flora and fauna impacts when setting permit or license conditions. For example, there is much scope for variability when selecting the noise data points to be included and also determining the 'line of best fit' for those set of noise data points – such variances could mean the difference between compliance or otherwise when assessing the results of a noise testing program.

## 5.2. Recommendations

- 5.2.1. State governments should review and clarify their current arrangements for the setting of wind farm environmental standards along with the arrangements for oversight and confirmation of compliance with those standards. It is strongly preferred that the department or agency setting and maintaining the various wind farm standards is independent of the department or agency responsible for planning and applying those standards. In addition, the compliance authorities for a wind farm should be clearly defined, transparent, accessible to the community and able to receive and investigate allegations of compliance breaches. Where compliance oversight currently rests with local government, appropriate support and resources should be made available to the council/shire to enable them to effectively perform their compliance and investigative responsibilities, including being equipped with the appropriate policies and procedures to handle alleged breaches of permit/license compliance and/or laws.
- 5.2.2. Based on the outcome of the review outlined in Recommendation 5.2.1, state governments should consider whether or not the current arrangements are appropriate, effective and consistent with best practices for the independent development, maintenance, compliance management and governance of wind farm environmental standards. If planning functions or local councils are designated as the responsible compliance authority, they should be provided with appropriate support and resources to assist them in carrying out their responsibilities.

- 5.2.3. In considering the above recommendations and possible reforms, the potential roles of an appropriate independent, state based, compliance agency (such as a state environmental protection or regulatory authority) could include responsibility to:
- Set and maintain the environmental standards applied to wind farms, including noise, shadow flicker, visual amenity, flora and fauna, environment and heritage (noting the role of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* with regard to Matters of National Environmental Significance including protected flora and fauna), along with specifying the methods and procedures for measurement of the prescribed standards.
  - Review planning applications for wind energy projects and recommend/require permit conditions related to the environmental standards. Environmental standard conditions in wind farm permits should clearly state the process for how the measurements are to be undertaken and reported as well as provide the opportunity for peer review of the process, calculations and results.
  - Provide or facilitate peer review and audit of expert reports, including review of testing and modelling programs, submitted by the developer related to permit requirements.
  - Where appropriate, license the wind farm once it is constructed and issue and monitor license conditions for the operation of the wind farm that may be subject to review and renewal. State Governments should also receive and review regular reporting against those licence conditions from the wind farm operator and may withdraw licences in the event of unrectified material breaches of applicable license and permit conditions.
  - Receive and investigate complaints related to environmental standards, including alleged breaches of non-compliance with permit requirements or relevant laws.
  - Confirm as required the compliance or non-compliance of a wind farm with regard to environmental standards, related permit conditions and relevant laws.
  - Report material wind farm compliance breaches and investigations to the Clean Energy Regulator and other relevant agencies.
  - Liaise with other agencies (e.g. Civil Aviation Safety Authority, Australian Government Department of the Environment and Energy) on assessments and compliance matters that involve such agencies.
- 5.2.4. Planning permits (and/or applicable licenses) for wind farms should clearly state:
- The oversight organisation(s) or person(s) accountable for determining compliance of a wind farm with its permit (and license) conditions, both at post-construction and ongoing operational stages.
  - The process and contact details for lodging a complaint or alleged breach of permit (and/or license) compliance.
  - The process to be followed in the event that a wind farm is found to be non-compliant with one or more of the permit (and/or license) conditions.
  - A requirement for the developer or operator to publish transparently, on the wind farm's website, the process and contact details to make a complaint or alleged compliance breach to the designated oversight organisation.
- 5.2.5. During the period between the commencement of a wind farm's commissioning/operation and the completion of any required post-construction assessments, the wind farm could be

designated to be in 'provisional' or 'deemed' compliance, pending the results of the assessments. In this scenario, a wind farm can only move from 'provisional compliance' to being confirmed as 'compliant' once the responsible authority (or regulatory authority) has confirmed it is satisfied that the wind farm is compliant as a result of any post-construction assessments. If compliant status is not achieved within a prescribed period, the wind farm may be declared to be non-compliant by the responsible authority or regulator until compliance is reached. Once a wind farm has completed post-construction assessments and confirmed to be in compliance, ongoing compliance is overseen by the designated agency or responsible authority.

- 5.2.6. If a wind farm's facilities are deemed by a relevant authority to be in an unrectified material breach of compliance, the wind farm should be required by the responsible compliance authority to cease operating or curtail the non-compliant facilities until compliance can be achieved.
- 5.2.7. The Federal Government should review the compliance enforcement powers and actions that may be taken by the Clean Energy Regulator in the event of a suspected or reported unrectified material breach of compliance.
- 5.2.8. Governments should consider reviewing the primary standards across all jurisdictions for noise limits and setback distances. Based on current observations, it would appear that an appropriate level for a consistent noise limit would be 35 dB(A)\*, measured outside of the residence (with the result rounded up or down to the nearest whole number), and a minimum setback distance of 1.5 km between a residence and the nearest turbine (note: for turbines with a tip height of 200 metres or greater, a 2 km setback distance may be more appropriate to reduce visual amenity impacts). Applied penalties for specific noise conditions such as tonality and special audible characteristics be set at 5 dB(A), however such noise complaints should also be assessed on a subjective and reasonableness test by an approved, independent expert. Protocols should be developed and in place to clarify interpretation of 'borrowed' noise standards. In addition to a setback distance between a turbine and a residence, a minimum setback distance of 200m (as measured at ground level from the centre of the tower or 150m from the extended horizontal blade tip, whichever is the greater) and a neighbour's boundary fence line or public road carriageway, should also be considered. Finally, consideration should be given to setback distances between a wind farm and a township or city boundary. A distance of 5 km may be appropriate to preserve amenity and provide some flexibility for planning growth of the township (note – consideration of amending these setback provisions may be appropriate in the case of a small-scale, community-supported and owned wind energy facility).
- 5.2.9. The noise assessment design and compliance testing conditions should include assessment and testing of the wind farm's electrical infrastructure (transformers, substations, back-up generators etc.) and noise levels from these sources need to be compliant with the applicable standards.
- 5.2.10. A setback distance between a residence and other infrastructure associated with the wind farm, such as transmission lines, should also be considered to help alleviate visual amenity impacts and noise considerations. This would include a 1 km minimum setback distance between a residence and major transformer or generation infrastructure, such as a terminal substation. Where possible, transmission infrastructure should be placed underground and/or well away from residences and road reserves. If this is not possible, a minimum setback distance of 100m should be considered in planning guidelines for power lines of 66kV or

\* LA90, 10min; or background noise plus 5 dB(A), whichever is the greater amount

greater. Road safety guidelines and standards must be observed for power poles placed in the road reserve.

5.2.11. Consideration should also be given to the current standards for shadow flicker. A typical standard at present is a limit of 30 hours of shadow flicker per year at a resident's external window or garden area. This standard, used across Australia, has been sourced from shadow flicker standards developed and used in Europe, where set-back distances to residences are typically less restrictive. At say a 1 km distance from a turbine, it would be very unlikely to receive 30 hours of actual shadow flicker at a residence. A more appropriate standard in the Australian context may be no more than a total 15 hours of actual shadow flicker per year at a residence and no more than 30 minutes of shadow flicker should be experienced on a given day. Neighbours experiencing (or likely to experience) shadow flicker that is annoying should also be provided with the opportunity for having visual screening installed.

5.2.12. Final siting adjustments for turbines during construction ('micro-siting') should be limited to a distance of no more than 100m from the approved site location, be no closer to a residence (or property boundary per Recommendation 5.2.7) and be properly documented, including the reasons for the change. Micro-siting of a distance greater than 100m should require written approval from the responsible authority. Power poles installed in the road reserve must comply with relevant standards and guidelines for setback distances from the carriageway, comply with any road safety requirements and road safety barrier specifications, and pole locations must be pre-approved by the responsible authority.

## 6. Use and selection of Experts

### 6.1. Observations

The design and approval of a proposed wind farm relies heavily on third-party consultants (or 'experts') to prepare a range of reports including assessments related to noise, visual amenity, shadow flicker, aviation impact and various environmental assessments.

Experts are selected and paid for by the developer. The expert reports are typically included with the developer's submission to the responsible authority when seeking approval for the wind farm project. Many of the assessment reports rely on complex calculations or results from predictive computer modelling. The accuracy of the assessment reports and recommendations is therefore highly dependent on the quality and precision of the assumptions used, correct application of calculations, the integrity of computer modelling applications, the accuracy of the data used and the skills of the expert in interpreting the output of the resulting analysis.

Once the wind farm is built, experts are often re-engaged to carry out post-construction assessments. These assessment reports utilise actual data from the wind farm, however still rely on assumptions and modelling to analyse the collected data and present in a format to derive conclusions.

It is very common practice that experts engaged to perform the design assessments and reports during the planning phase are the same experts engaged by the developer to perform the post-construction assessments. Developers may also often use the same experts on multiple projects.

The selection and use of the same expert in both the design and then post-construction phases of a wind farm may give rise to perceived or real conflicts of interest between the developer and the expert and the desired expectations placed upon the expert to confirm a wind farm's compliance. As a hypothetical example, an acoustician engaged to assess the proposed wind farm's design for compliance with the noise standard and is then engaged to assess the operating wind farm for actual compliance, may be placed in a difficult situation if the acoustician discovers some aspects of the operating wind farm is in fact non-compliant, particularly if areas of non-compliance may be a result of errors made in the original acoustician's design assessment.

There is certainly scope for a much better separation between the experts used for the predictive assessments used in the design versus the experts used for the post-construction assessments of a wind farm, along with the addition of audits of the expert's work so as to minimise errors, maximise transparency and better manage perceived or real conflicts of interest.

In summary, best practice that has been observed is as follows:

- A suitably qualified expert is appointed by a developer to carry out relevant assessment as part of planning and design activity. The expert must be free of any real or perceived conflicts of interest.
- An independent auditor is appointed to scrutinise and review expert's assessment/design report and makes findings/recommendations known to the developer, the responsible authority and other relevant agencies (e.g. Civil Aviation Safety Authority, Country Fire Authority, Environment Protection Authority, Federal Department of the Environment and Energy etc.).
- Once the wind farm is constructed, a different expert (to the assessment expert) is appointed to carry out any required post-construction compliance assessments.
- The post-construction compliance report is then reviewed by a different independent auditor for accuracy and integrity. The auditor makes findings/recommendations known to the developer and responsible authority.

These additional steps and separation of experts and auditors will go a long way to enable strengthened confidence for all stakeholders in the significant decisions being made on the basis of expert reports. The process will also better protect industry from very costly errors and risks of being non-compliant.

After piloting this approach in 2018 for noise assessments at a proposed Victorian wind farm, the Victorian government has formally adopted this framework for all new and modified wind farm planning permits. Other states have implemented, or are considering implementing variations on the above.

In addition to noise assessments, other expert disciplines that lead to material issues in 2018 included aviation safety assessments and vegetation clearing assessments for transportation routes.

Finally, it is expected that these reforms will increase the opportunities for additional experts and auditors as well as help facilitate growth of skills and firms in the relevant disciplines.

## 6.2. Recommendations

- 6.2.1. Given the heavy reliance on assessments provided by experts in wind farm planning and compliance decision-making, qualified experts used for wind farm planning and compliance assessment engagements should be ideally selected from an approved panel or list. The panel or list is to be maintained by the responsible authority (or environmental regulator) and expert selection for a given project is to be approved by the responsible authority.
- 6.2.2. To ensure independence and remove any real or perceived conflicts of interest, the expert organisation (or expert) selected to perform post-construction compliance assessments at a wind farm should be a different expert organisation (or expert) to the one engaged for the design/planning phase of that wind farm.
- 6.2.3. Expert reports, assessments and techniques used for planning submissions, such as the predictive noise assessment and the post-construction noise testing plan, should be reviewed and assessed by an independent auditor, appointed or accredited by the responsible authority and/or relevant regulator. Further, expert reports prepared with respect to post-construction compliance should also be reviewed and assessed by a different,

independent auditor, also appointed or accredited by the responsible authority and/or relevant regulator.

6.2.4. The appointed independent auditors (refer to Recommendation 6.2.3) should be suitably qualified, experienced and accredited, have the ability to assess the integrity and accuracy of the expert's report and be able to identify and confirm compliance or non-compliance with the relevant permit conditions and/or prescribed standards.

6.2.5. Planning approval processes should carefully take into account the advice of auditors and referral agencies, such as CASA, before deciding on whether to approve a project. Further, designated authorities, such as CASA, Emergency Response, EPAs etc. should be deemed to be statutory referral agencies whereby their advice and recommendations must be adhered to by the responsible planning authority.

## 7. Wind Farm Complaint Handling and Emergency Procedures

### 7.1. Observations

#### Complaint handling

Wind farms are typically required to establish a complaint handling procedure and supporting systems and processes to comply with planning permit conditions. It is also common sense that the wind farm be able to properly receive, investigate and resolve complaints as part of normal facility operations and effective community engagement.

Complaint handling procedures are generally required to be submitted and endorsed by the responsible authority. However, currently, requirements for complaint procedures are often limited to noise and construction complaints only. Limited guidance is provided in permit conditions as to the process, scope, requirements and standards that the complaint handling procedure should adhere to.

While wind farms are likely to be compliant with the requirement to submit and have an endorsed complaint handling procedure, the Commissioner's observations have been that a number of wind farms (or proponents) have not published the procedure or communicated the procedure to the community. This lack of transparency can make it difficult for community members to know how to make a complaint and the process by which they should expect their complaint to be handled.

It is pleasing to see that many wind farms have adopted the Commissioner's suggestions to make their procedures transparent and available and solid progress has been made in both the transparency of wind farm complaint procedures and compliance with their processes for complaint handling. However, there are still further opportunities for some wind farm proponents to ensure they are following their own documented procedures when handling complaints, and avoid situations including:

- wind farms not following their own published procedure for handling complaints
- wind farms failing to internally escalate the complaint when the complaint has not been resolved
- multiple complaints from a resident about the same issue – with no visible action being taken by the wind farm operator to investigate or resolve
- a lack of rigour in investigations and clarity of correspondence
- complaints remaining continuously open when they should be closed, and
- a lack of clarity regarding next steps in the process leading to numerous complaints that remain unresolved and/or not closed.



Even if the respective endorsed complaint handling procedures were being followed, there is also a wide range of wind farm complaint handling procedures in place that vary by developer and project, resulting often in a lack of consistency in the quality and effectiveness of the procedures. As wind farm operators possess a wide range of complaint handling skills, there continue to be further opportunities to improve the capability of staff and effectiveness of the wind farm industry's complaint handling procedures.

The Commissioner has encouraged a number of wind farm developers and operators to voluntarily publish their complaint handling procedures on the wind farm's website. Many wind farms have now complied with this request. Some wind farm proponents have also revised their complaint handling procedures as a result of discussions with the Office. The Commissioner continues to make suggestions to improve existing complaint handling procedures to the many industry members who have sought assistance from the Office.

### **Noise considerations**

While objective measures and standards are used to determine compliance with noise restrictions, it is also evident that there is further scope to investigate complaints relating to noise emissions from turbines and other infrastructure. In assessing noise-related complaints, the objective 'tests' currently in place do not necessarily capture the tonal character of noise emissions that a complainant may be experiencing. For instance, maintenance or operating issues with infrastructure (such as a turbine or a substation transformer) may lead to harmonic frequencies that produce a harsher tone to the human ear. While this is not typically represented in noise assessment data, contemporary noise measurement or recording devices can be used to indicate that the tonal character of a particular noise emission may reasonably be considered to be disturbing or offensive to a complainant.

Other events can cause abnormal noise annoyance from wind turbines. These include loose bolts, lack of greasing of the rotating nacelle during the yaw process and lightning strike of a blade (piercing a hole in the turbine blade that causes a high-pitched whistling sound). These situations require a rapid response to a complaint and it is in everyone's interest that the turbine be repaired and the noise emission rectified.

### **Permit requirements**

Following the Commissioner's discussions with the relevant Minister and Department, the Victorian Government moved quickly to introduce additional permit conditions related to complaint handling procedures and transparency based on the Commissioner's initial observations and recommendations. It is understood that these additional conditions have been applied to both new, renewed and modified planning permits issued for wind farms in Victoria.

There may also be other avenues for complaints to be lodged by residents in proximity to a wind farm. In Victoria, complaints about 'noise nuisance' can be lodged under the *Public Health and Wellbeing Act 2008* to local government. Council's need to be fully aware of their responsibilities under this Act and ensure they have appropriate documented procedures to receive and handle wind farm complaints in the case they are lodged under this legislation.

Finally, industry bodies such as the CEC may have a key role to play in leading the development and promotion of consistent, best practice complaint handling models and procedures for the wind energy industry that can be adopted by industry members, configured for their specific operations.

### **Emergency procedures**

The Commissioner has also observed opportunities for clearer protocols to be put in place between wind farm operators and emergency response agencies, in particular as it relates to aerial firefighting and the ability to direct a rapid shutdown of wind turbines and the positioning of turbine blades during a shut-down to minimise the obstacle.

Not all turbine manufacturers or specific turbine models, have the ability to remotely lock the turbine blades into the required position for safe aerial firefighting. Some blades will continue to drift with the wind, further increasing the risks to pilots and reducing the workable airspace between turbines to fly and drop retardants.

Other potential obstacles to aerial firefighting, such as meteorological masts, radio towers and powerlines may also exist around the wind farm site and pilots need to be well aware of this infrastructure. A consistent standard to the visible identification of meteorological masts should be considered and adopted into planning guidelines and aviation safety assessments.

## 7.2. Recommendations

- 7.2.1. Planning permit conditions should stipulate that wind farm complaint handling procedures support all types of complaints raised about the wind farm and also meet minimum best practice standards for complaint handling procedures (such as the *Australian/NZ Standard for Complaint Handling – AS10002:2014*). The developer should implement appropriate systems and processes to support the procedures and maintain an appropriately detailed complaint register.
- 7.2.2. Planning permits should include a condition requiring the endorsed complaint handling procedure and the complaints register to be published on the wind farm's website. The website should include a toll-free number and an email address for making contact with the wind farm operator to make an enquiry or complaint. Developers should also proactively implement these provisions from the very commencement of development as part of best practice transparency and community engagement.
- 7.2.3. Planning permits should include a condition requiring the endorsed complaint handling procedure to be followed and be complied with by the developer. Failure to comply could be deemed as a material breach of permit compliance.
- 7.2.4. The responsible authority should have the powers and capability to audit a wind farm's complaint handling activities and complaints register to monitor compliance with the procedures and the planning permit conditions.
- 7.2.5. The complaint handling procedure and the wind farm operator should have the capacity to accommodate handling of urgent or emergency complaints. These complaints may be related to safety issues as well as unacceptable noise conditions due to damage to the turbine caused by external events such as lightning strike or mechanical failure. The wind farm operator should respond immediately, on-site, to assess, address and rectify such issues. While objective measures and standards may be in place for assessing noise emissions, a subjective, reasonableness test should also be applied when assessing noise emissions such as abnormal noise emissions, tonality, special audible characteristics and low frequency noise.
- 7.2.6. Complaint handling bodies such as developers, local councils, state governments and compliance authorities should ensure their complaint handling procedures are relevant for wind farm matters. Further, complaints need to be closed out at the appropriate time with the complainant being advised accordingly.
- 7.2.7. For extreme emergency conditions, such as a bushfire, the wind farm operator should have appropriate controls, protocols and procedures in place, consistent with the emergency response requirements, to ensure the wind farm can be rapidly shut down. Power network operators should be aware the wind farm capacity may need to be shut down quickly in the event of a bushfire.

- 7.2.8. Wind farms should also work with the relevant firefighting agency to review procedures related to turbine blade positioning during a fire that minimises restrictions to aerial firefighting. The wind farm should also use appropriate marking devices to ensure transparency of other aerial obstacles such as meteorological masts, radio towers and powerlines to the firefighting agency. Such obstacles should require planning permits, a referral to CASA and be assessed as part of the aviation impact statement.
- 7.2.9. Wind turbine design standards need to be upgraded to mandatorily require the ability to remotely position and lock turbine blades in the event of a bushfire. Developers should only select turbines that conform to this standard.
- 7.2.10. The industry peak body (CEC) should continue to provide leadership to the industry by developing and promoting best practice standards for complaint handling, along with community engagement and quality assurance of member companies. The CEC could also encourage or mandate that its industry members voluntarily publish their wind farm's complaint handling procedure and that members are properly trained and skilled in complaint handling.
- 7.2.11. Policies and procedures for handling wind farm noise complaints lodged with local councils should be in place where the possibility exists for noise complaints to be made either as an alleged breach of compliance and/or under other governing legislation, such as the Victorian *Public Health and Wellbeing Act 2008*.

## 8. Site Selection

### 8.1. Observations

#### Background

The selection of a potential site for a proposed wind farm may take into account a range of factors including the available wind resource, proximity to existing transmission infrastructure, potential for securing landowner arrangements and other approved development in the area.

Current transmission infrastructure was originally designed and built many years ago based on existing energy resources (such as coal) and did not envisage the significant shift to renewable resources such as wind and solar, which are often optimally (in all other respects) located in other areas, typically well away from existing grid infrastructure.

Prospecting developers are not generally restricted in initiating a new project on a particular site and will often commence by holding discussions with adjoining landowners to seek their agreement to host turbines. As such, prospective and developed wind farms can be located in a wide variety of site scenarios, from sparsely populated areas to locations inhabited by lifestyle property owners on small acreages.

#### Site impacts

The Commissioner's experience to date indicates that there is a much higher likelihood of community issues and concerns to contend with when a proposed or operating wind farm is located near or amongst more populated areas. Often, the more populated areas correlate with the proximity and availability of transmission infrastructure, however, they can also result in a very large number of neighbours who will reside in close proximity to multiple turbines.

Further, there may be multiple proposed (and/or existing) wind farms in a given area, with the potential for residents to be 'surrounded' by wind turbines if such projects proceed. These scenarios could lead to a range of compounding issues for residents including noise, visual amenity and potential economic loss. A further complication may occur if project construction timeframes overlap, placing enormous

pressure on local resources and infrastructure, in addition to the usual annoyances such as construction noise and dust.

The Commissioner has found that locating turbines on the top of hills or ridges, while optimum for capturing the wind resource, can have greater impacts on visual amenity, may lead to specific noise and shadow flicker scenarios for residents in the valley beneath and may have other impacts on the community. Access roads for hill ridge wind farms can also be obtrusive and significantly damage and constrain the available farming land in the area.

Conversely, there appear to be minimal issues raised to date about wind farms that are located on large land holdings, or on flat or slight to moderate undulating land and sites that are well away from neighbours (noting comments made earlier regarding landowner and neighbour agreements in subsections 1 and 2).

### **Optimising site locations**

There may be opportunities to select and prioritise wind farm projects, from the current pipeline of wind energy generation projects, which better balance the likelihood of acceptance of the project by the surrounding community. Meeting the 2020 goals of the Australian Renewable Energy Target scheme would require approximately only one in three of prospective wind farm projects (on a capacity basis), based on data provided from the CEC and the Clean Energy Finance Corporation, to go ahead. There is therefore an ability to select wind farm projects that meet other key parameters, including economic and regional development goals, while also optimal from a community impact site-selection criteria.

There can be great variances in the final design and turbine layout from the wind farm's original design and approved permit conditions. As these changes occur, there are not necessarily sufficient processes in place to re-assess other nearby wind farm projects for potential compounding impacts on residents and whether or not projects with such compounding impacts should proceed. There can also be cumulative effects during construction of more than one wind farm in a locality, placing enormous pressures on roads, resources (such as gravel), accommodation and skilled tradespersons.

Given that existing wind farms have most likely already selected optimal sites for their location, management and selection of appropriate new sites from remaining site options may become more difficult. A more 'top-down' approach to selecting optimally located wind farm projects, together with appropriate augmentation of the grid, that should proceed may assist greatly in this challenge going forward.

## **8.2. Recommendations**

- 8.2.1. State and local governments should consider assessing proposed wind energy projects on a wider range of criteria (including the suitability of a location from a community impact perspective and the degree of community support) and then prioritising projects for approval or progression accordingly. 'Reverse auction' feed-in tariff schemes such as the schemes recently deployed by the ACT and Victorian governments, could be an example of how to prioritise and incentivise projects to be developed in preferred locations as well as promote best practice community engagement. Recently updated visual amenity guidelines introduced in New South Wales could also restrict development in more populated areas, including reduction of the possibility of multiple wind farms in a given location.
- 8.2.2. State and local governments may also consider other criteria in assessing and prioritising wind energy projects, including economic development and the ability to both support regional and industry development through improved local electricity supply and infrastructure in regional communities. Appropriate zoning overlays for clarifying where it would be appropriate or not appropriate to build and operate wind farm developments should also be considered.

- 8.2.3. Prospecting for new wind farm development sites could be subject to an ‘approval to prospect’ requirement issued by the responsible authority before prospecting commences. The approval to prospect a specified potential site would be granted on a range of criteria, including the suitability of the proposed site as well as the credentials of the developer and key personnel. See also Recommendation 1.2.9.
- 8.2.4. As part of the assessment suggested in Recommendation 8.2.1, the responsible authority should have processes in place to obtain and verify clear evidence of the developer’s consultations with affected landowners and residents and be able to assess the likelihood of strong community support for the project.
- 8.2.5. Once an approved wind farm has commenced construction, the responsible authority should re-review other proposed wind farm projects in the area for any compounding effects on residents, including noise, shadow flicker and visual amenity. The responsible authority should also have the ability to require a modification to the planning permit and turbine layout of those projects that have not already materially commenced construction. Background noise levels should exclude any noise contribution from a neighbouring operating wind farm for the purposes of applying the noise standard.
- 8.2.6. State governments should publish and maintain a map of all operating and proposed wind farms, including the location of the wind farm, location of turbines, the status of the project (proposed, permitted, in construction or operating) as well as information about the wind farm’s design, including number and size/rating of turbines and information about the proponent.
- 8.2.7. State governments, in conjunction with the appropriate Australian Government departments/agencies and the Australian Energy Market Operator (AEMO), should review current and planned transmission infrastructure to ensure it allows new large scale renewable generation facilities to be connected in the most optimal locations for renewable resources. AEMO’s Integrated System Plan has identified a number of high potential renewable energy zones to facilitate transmission planning.

## 9. Health Matters

### 9.1. Observations

Much has been and continues to be written and researched on the topic of wind farms and health effects. Debate continues around the world as to whether a wind farm causes physiological harm to residents living in its vicinity.

In 2016, the NHMRC announced the funding of two research studies into wind farms and health. One study is focused on the effects of wind farm noise on sleep and is led by Professor Peter Catchside at Flinders University. The other study is focused on measuring the effects of infrasound and is led by Professor Guy Marks at the University of New South Wales.

In addition, in late 2015, the Australian Government established the Independent Scientific Committee on Wind Turbines to provide advice on a range of matters including wind farm noise levels and the relationship to health effects.

A number of complaints about wind farms received by the Office include references to health impacts as a result of wind farm operations. Health conditions cited in complaints include sleep disturbance, headaches, ear-aches, ‘pounding’ in the ears, tinnitus, tachycardia, high blood pressure, sight impairment, diabetes, chest-tightening, nausea and general fatigue. The complaints generally state that such conditions are caused by audible noise and low frequency noise, including infrasound, along with vibration sensations attributable to the operation of nearby turbines. In some cases, complaints have stated that some health conditions are persisting even when the turbines are not operating.

Numerous invitations have been extended to complainants to provide evidence of their medical conditions. Complaints regarding health concerns received by the Office have, in the main, provided only anecdotal evidence regarding stated health issues and perceived causality. It has therefore been difficult to form an opinion on whether or not the stated health conditions reported by complainants are valid and, if valid, whether or not the health conditions are possibly a result of the wind farm's operations or from some other known cause. The Office will continue to handle complaints, with supporting evidence, from community members regarding potential health effects from operating wind farms.

Since the Office has commenced, 65 complaints about operating wind farms have been received. These complaints relate to 11 operating wind farms out of a total of more than 80 operating wind farms across Australia. Of these 65 complaints, approximately half of the complainants cited concerns about health impacts from the operating wind farms. Of these, a very small number of complainants agreed to work with the Office and provide evidence of the stated health issues. In all of these cases, the root cause of the stated health issue was not attributable to the wind farm.

Further, in 2018, only eight complaints about operating wind farms were received. The clear majority of complaints received have been about proposed wind farms. On the basis that a wind farm has to be built and operating before it could possibly cause a physiological health effect, the potential cohort of potential physiological health complaints is very small.

It is possible that stated health conditions that exist may be as a result of other known causes not related to the wind farm's operations. Of material concern is the potential situation whereby a resident may fail to seek and obtain appropriate medical advice and treatment for a treatable health condition, due to the possibly incorrect assumption that an operating wind farm is the perceived cause of the condition. For example, if a resident is experiencing sleep difficulties, they may be advised by their general practitioner (GP) to consult a sleep specialist for a proper diagnosis of the root cause and advice on treatment to remedy the condition. If the GP's advice is not followed, the cause of the condition may persist unnecessarily.

Health conditions may also arise as a result of stress, annoyance or anxiety related to the presence of an operating wind farm or concerns about the effects of a proposed wind farm. Further, uncertainties in relation to whether a proposed wind farm will actually proceed (a period which may extend for several years) may also contribute to stress and anxiety. Again, affected residents may need to seek appropriate medical treatment for these ancillary health conditions as well as seek ways to resolve their concerns.

The Office will continue to monitor relevant decisions that explore evidence about wind farms and health in consultation with the Independent Scientific Committee on Wind Turbines, such as the recent guidelines issued by the World Health Organization, as well as hearing outcomes, such as the Administrative Appeals Tribunal decision in *Waubra Foundation v Australian Charities and Not-for-profits Commission* and the ongoing appeal regarding the proposed Palmer wind farm in South Australia. The Office will also monitor and continue engagement regarding any results of the NHMRC funded studies and the work of the Independent Scientific Committee on Wind Turbines, as well as assessing any further evidence gathered through its complaint handling activities.

## 9.2. Recommendations

- 9.2.1. Federal and state governments should continue to assess the outcomes of research into wind farms and health, including outcomes of the two NHMRC funded wind farm health studies and recommendations of the Independent Scientific Committee on Wind Turbines. Environmental standards, such as noise standards, should be monitored and reviewed in line with any recommendations arising from these programs.

- 9.2.2. Residents living in the vicinity of an operating or proposed wind farm that are experiencing health conditions should be encouraged to seek appropriate medical advice to properly diagnose and treat any health-related conditions accordingly. GP's receiving patients from wind farm locations should maintain an awareness of wind farm and health matters through bodies such as the Australian Medical Association and assist patients in understanding the need for appropriate testing, diagnosis and remedies for the presented health conditions or concerns.
- 9.2.3. Medical practitioners who identify potential causal links between a patient's health condition and their proximity to the operation of a wind farm should report such incidences in an appropriate way to the relevant professional body, association and/or government agency.
- 9.2.4. Residents who are experiencing unacceptable noise levels from a wind farm should be encouraged to report such incidents to the wind farm operator, the compliance authority and/or the appropriate regulator to initiate the appropriate investigation and resolution of the noise incidents.
- 9.2.5. Residents lodging health related complaints with the Office should be prepared to provide and share evidence regarding their stated health conditions and any medical assessments that identify possible causality of the wind farm as a contributor to the health conditions.

**GLOSSARY**

A-weighted scale	A scale that is applied to instrument-measured sound levels to replicate the relative loudness perceived by the human ear.
Amenity	The visual impact a wind farm has on the landscape.
Australian Government	The Government of the Commonwealth of Australia (also referred to as Federal Government).
Australian Wind Alliance (AWA)	A not-for-profit organisation that supports the wind energy industry in Australia, with the objectives of boosting regional economies and reducing pollution and greenhouse emissions.
Clean Energy Council (CEC)	The peak not-for-profit organisation supporting the clean energy industry in Australia. The CEC represents a range of clean energy sectors and works with governments and other organisations to promote the industry.
Community Consultative Committee (CCC)	A CCC is a membership that is set up to facilitate consultation between wind farm developers, the community, local councils and other stakeholders that may be involved in the development phase or operation of a wind farm.
Community Association	A non-government association of participating members of a community who facilitate representative community engagement in the development process.
Community Engagement	The consultative process of wind farm developers supporting the participation of community members in the development process.
Commercial Dispute	An issue regarding the contractual goods or services of a wind farm whereby financial compensation has been sought by a party (for example, a host or a neighbour).
Complainant	One or more resident(s) from a residence who has contacted the Office for the purpose of making a complaint.
Concerned Resident	A person who resides in a dwelling within proximity to a proposed or operating wind farm facility, who holds concerns about potential impacts of the proposed or operating wind farm and may make a complaint to the Commissioner.
Construction	The stage in which the wind farm including access roads is being built. The construction stage may last a number of years.
dB	Decibels, a measurement unit used to describe the level or intensity (loudness) of a sound.
dB(A)	A-weighted decibels, a measurement unit that used to express the relative loudness of sounds in air as perceived by the human ear.
dB(C)	C-weighted decibels, a measurement unit that is used to measure low-frequency noise.
dB(G)	G-weighted decibels, a measurement unit that is used to measure to infrasound.
Economic Loss	The potential negative economic impact that a proposed or developed wind farm may have on a particular community or individuals within a community. This is typically the loss or perceived loss of property values or business within proximity to a proposed or operating wind farm.
Expert	A person who has special skill, knowledge or authority in a particular field of study.
Health	General physical or mental condition of a concerned resident.
hz	Hertz, a unit which measures the frequency of sound waves, perceived by the human ear as pitch. The typical range of human hearing is 20-20,000 hz.
Industry Association	An organisation founded and funded by businesses and other parties that have an interest in the wind energy industry.
Industry Member	Employee or other party who is involved as a member of an industry association.
Infrasound	Sound that is lower in frequency than 20 Hz or cycles per second, the 'normal' limit of human hearing.
Independent Scientific Committee on Wind Turbines	An independent, multidisciplinary, expert group established in 2015 by the then Minister for the Environment, the Hon Greg Hunt. The Committee was primarily established to investigate and provide advice on the potential impacts of sound from wind turbines on health and the environment.
LA90,10min	The A-weighted sound pressure level, obtained by using the fast time-weighting, that is equal to or exceeded for 90% of a 10 minute time interval. The values for individual 10 minute time periods are highly variable and a function of the hub height wind speed. The actual value for a particular hub height wind speed is determined by best fitting a polynomial function of hub height wind speed, which can be up to fourth order, to the individual 10 minute time period LA90,10min values when the wind turbines are operating. It is corrected to remove the effect of the background noise by subtracting a background noise function determined in the same way when the wind turbines are not operating.



	For example, for a particular hub height wind speed, the $L_{A90,10min}$ function determined as described above must be less than the greater of 35 dB and the background noise function determined as described above plus 5 dB.
Micro-siting	The process whereby the specific location of a wind turbine is determined.
National Health and Medical Research Council (NHMRC)	An independent statutory agency and expert body that promotes the development and maintenance of public and individual health standards. NHMRC provides research funding and development of advice, drawing upon a broad range of resources.
Natural Environment	The land, water, biodiversity, flora and fauna and the naturally occurring ecological processes that may be impacted by the development or operation of a wind farm.
Neighbour	A resident of a property that is within close proximity to wind farm turbine/s, but does not host the turbine.
NZS 6808:1998	A recognised standard in New Zealand introduced in 1998 that provides methods for the prediction, measurement and assessment of sound from wind turbines. This standard was based on the United Kingdom 1996 Energy Technology Support Unit (ETSU) report <i>The assessment and rating of noise from wind farms</i> (ETSU-R-97, 1996). However the New Zealand standard introduced the L95 measurement used to describe background sound in New Zealand. The standard limit was 40dB, with a 'background +5 dB' variable. This standard was used for all wind farms in New Zealand until the introduction of the 2010 standard and was also adopted in Victoria prior to 2010. This standard is now succeeded by NZS 6808:2010.
NZS 6808:2010	A recognised standard in New Zealand introduced in 2010 that provides methods for the prediction, measurement and assessment of sound from wind turbines. This standard succeeded the 1998 version (NZS 6808:1998). While the 1998 version was introduced prior to significant wind farm development in New Zealand, a number of technical refinements and incremental enhancements were included in the 2010 standard. Notably, the standard also provided for a more stringent 'high amenity noise limit' in special local circumstances.
Ombudsman	Appointed authority to assist the public by investigating and resolving complaints on a specified issue.
Planning Process	A local, state or Federal Government process to determine whether a proposed project will be approved.
Responsible Authority	The planning authority responsible for the project from a planning/approval/compliance perspective.
Safety	The potential for the wind farm to cause danger, risk or injury to residents of a community within proximity to a wind farm. May include issues such as sleep deprivation, fire hazard, or any personal well-being.
Shadow flicker	The shadow cast by the sun over the rotating blades of a wind turbine that results in a rotating shadow affecting neighbouring properties.
Supportive Member	A member of the community that is in favour of a proposed or operating wind farm, including persons who reside in a dwelling within proximity of a proposed or operating wind farm
Terms of Reference	The specifications that outline the scope and limitations of the Office of the National Wind Farm Commissioner. See <a href="#">Appendix A</a> .
Vibration	An effect of the infrasound that is produced by turbines.
Wind Farm Maintenance/Operations	Related to the ongoing process of ensuring the upkeep of the wind farm turbines for the life of the project.
Wind Turbine	Device with at least one moving part called a rotor assembly, which is a shaft or drum with blades attached, which is used to convert the wind's kinetic energy into electrical power.

## **APPENDIX A – TERMS OF REFERENCE 2018-21**

### **National Wind Farm Commissioner Terms of Reference 2018-21**

The National Wind Farm Commissioner has been reappointed for three years due to the ongoing growth in renewable energy and the Government's continued commitment to ensure community concerns are acknowledged and addressed.

The Commissioner will work collaboratively with all levels of government, scientists, experts, industry and the community to resolve complaints from community members about proposed and operational wind farms, large scale solar farms (5 MW or more) and storage facilities, such as large scale batteries (1 MW or more).

The Commissioner will refer complaints about wind farms, large scale solar farms and storage facilities to relevant authorities and help ensure that they are properly addressed.

The Commissioner will lead efforts to promote best practices, information availability, and provide a central, trusted source for dissemination of information.

The Commissioner, supported by the Australian Government Department of the Environment and Energy will report to the Minister for Energy and provide an Annual Report to the Australian Parliament on delivering against these Terms of Reference.

The Commissioner's role will not duplicate or override the important statutory responsibilities of other jurisdictions, such as those relating to the planning and approval of wind farms, large scale solar farms and storage facilities.

The Commissioner is to draw on the work of the Independent Scientific Committee on Wind Turbines.

The role of the National Wind Farm Commissioner will be extended for a period of three years, until October 2021, and will be re-evaluated by the Australian Government prior to that date.

## APPENDIX B – COMPLAINTS HANDLING POLICY



### Office of the National Wind Farm Commissioner

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#### COMPLAINTS HANDLING POLICY

(Version 2.2 10 January 2019)

#### Introduction and principles

1. The National Wind Farm Commissioner (the “Commissioner” or “we” or “our”) is an independent role created by the Australian Government, reporting to the Minister for Energy. A key role of the Commissioner is to receive complaints from concerned residents (“you”) regarding proposed or operating wind farm facilities, large scale solar farms (5 MW or more) and energy storage facilities, such as large scale batteries (1 MW or more). The Commissioner also works collaboratively with all levels of government, scientists, industry and the community to facilitate the adoption of best practices related to the development and operation of these facilities.
2. This document outlines the Commissioner’s policy and procedure for receiving and handling complaints. In undertaking this role, the Commissioner may assist parties to find resolutions to complaints. Where appropriate, the Commissioner may refer complaints about wind farms, solar farms and energy storage facilities to a relevant party or parties and help to ensure that they are addressed.
3. Residents should bear in mind that the Commissioner’s role in complaint handling is a facilitation role only. The Commissioner will not formally recommend particular solutions to disputes, arbitrate complaints or provide formal advice. The Commissioner may, however, suggest possible solutions for consideration by the parties.
4. In seeking to address resident complaints, the Commissioner will not seek to duplicate or override the important statutory responsibilities of State and Territory governments or local government authorities.
5. You may still pursue your complaint via other jurisdictions, such as formal legal action or other dispute resolution mechanisms.
6. Core principles that guide the handling of complaints by the Commissioner are:
  - We are independent.
  - Our role is to use best efforts to assist the parties to find acceptable outcomes and reach agreement on a way forward.

- We will assist parties to share fact and evidence based information relevant to a complaint so that they can work towards an outcome.
  - We will always act independently, impartially and ethically.
  - We expect that the parties involved in a matter brought to the Commissioner will act with integrity and respect, and be genuinely seeking an outcome to the issues raised.
  - The Commissioner’s process is a voluntary process.
7. The Commissioner will use best efforts to assist parties to resolve complaints received by the Office, however, the Commissioner will not provide legal, professional or technical advice to any person. While the Commissioner will undertake the role with due care, the Commissioner or the Commonwealth will not be liable for any loss or damage arising from the Commissioner’s activities.

## **Our procedures for handling complaints**

8. The Commissioner will receive complaints from concerned residents who reside in a dwelling within proximity to a proposed or operating wind farm, solar farm or energy storage facility. The concerned resident may be represented by an appropriate nominee acceptable to and approved by the Commissioner.
9. The Commissioner may decide not to handle a complaint. One of the factors in determining whether or not the Commissioner will handle a complaint will be how current the issue is. For example, the Commissioner is more likely to accept a complaint that relates to a current issue as there will be more current and available evidence and prospects of resolution. Older complaints, particularly those that were about issues that occurred more than six years ago, are unlikely to be considered.
10. Our procedures enable us to provide an independent, objective and consistent process for responding to enquiries and for handling complaints from concerned residents. There are five main steps in our complaint resolution process:
- i. Enquiry**
  - ii. Complaint**
  - iii. Referral**
  - iv. Conciliation**
  - v. Closure.**

### **Enquiry**

11. Your initial contact to the Commissioner will be treated as an enquiry if you:
- are requesting or providing information only
  - choose to remain anonymous
  - are not a resident or a person working within proximity to a proposed or operating facility; or
  - have lodged an initial complaint and need to provide more information before the matter can be accepted as a formal complaint by the Commissioner.

You may contact us by letter, email or telephone.

## Complaint

12. If you would like to lodge a complaint with regard to a proposed or operating facility, we require the following information from you in writing, via letter or email:

- your name
- your address
- your contact details, including telephone and email
- the name of the proposed or operating facility
- the approximate distance of the facility to your dwelling (e.g. if a wind farm facility, please specify the distance of the nearest operating or proposed turbine)
- the complaint you wish to make about the facility
- the basis of the complaint
- when you first made the complaint about the facility to the other party
- evidence in support of the complaint, including relevant dates
- a summary of any current or previous attempts to resolve the complaint, including relevant correspondence from you and other parties to the complaint
- the practical outcomes you are seeking in a resolution to the complaint
- your written permission for the Commissioner to discuss the complaint and provide your details to the other party or parties to the complaint, and
- other information we may deem necessary to assist us in attempting to understand the complaint and approaches for its resolution.

You may contact the Office for assistance and questions that you may have in preparing the materials to lodge a complaint.

### *Accepting your complaint*

13. When we have received all of the requested information from you to file a complaint, we will accept your complaint, confirm with you that your complaint has been accepted and ensure that you have been provided with a complaint reference number.
14. The Commissioner will review the materials provided and may contact you to discuss the matter. The Commissioner may also contact other parties that are relevant to the complaint and assess their willingness to work with us to resolve the complaint.
15. Based on the review of the information and subsequent discussions, the Commissioner will determine the next steps in the complaint handling process.

### *Information handling*

16. All information received by the Office for the purposes of handling these complaints will be managed by the Commissioner and staff in accordance with *The National Wind Farm Commissioner Information Handling Policy*, available at [www.nwfc.gov.au](http://www.nwfc.gov.au).

### **Referral**

17. In many cases, the complaint may be best handled by a direct referral to the other party, such as the project developer, project operator, a State or Local Government department or agency. The Commissioner will assist in facilitating the referral, where possible.
18. When referring a complaint, the Commissioner may need to pass on information that you have provided to the Commissioner, including your contact information, to the other party, department or agency.
19. The other party may contact you directly in writing to address the issues raised in your complaint or provide information to us that we may then share with you.
20. Following any correspondence or discussion between the parties, the Commissioner may contact you and enquire whether or not the complaint has been resolved.

### **Conciliation**

21. In the event that the complaint has not been resolved by referral, the Commissioner may seek to conciliate the complaint between you and the other party. If the parties are agreeable, the Commissioner will invite you and the other party to meet with the Commissioner for a discussion about the complaint and potential solutions. The meeting is an opportunity for the parties to come together, present their point of view and, in the presence of the Commissioner, attempt to resolve the complaint by agreement.
22. The Commissioner will confirm, after consultation with the parties, when and where the meeting will take place and who is to attend the meeting. The Commissioner will also confirm whether any support persons and industry representatives will be attending conciliation meetings.
23. At the beginning of the conciliation meeting, the parties will be informed by the Commissioner about the way the conciliation will be conducted and the role of the Commissioner at the meeting.
24. If parties do not resolve the complaint at the conciliation meeting, a further meeting may be scheduled if the Commissioner is of the view that a subsequent meeting would be productive.
25. If attempts to conciliate the complaint do not result in an agreement to resolve the complaint, the Commissioner may, at the Commissioner's discretion, make non-binding recommendations to the parties. Such recommendations are not enforceable and are made in good faith for the parties to consider and decide whether or not to accept any recommendations made.

## Closure

26. The Commissioner will consider whether a complaint is resolved and/or may close the file and stop handling the complaint at the Commissioner's discretion. Reasons may include where:
- you confirm that you have accepted the other party's offered resolution
  - information has been provided by the respondent that addresses the questions or issues raised
  - the Commissioner has referred your complaint to the respondent and you are in direct dialogue with that party to address your concerns and questions
  - the Commissioner has made recommendations to the parties
  - you do not provide consent for us to discuss your complaint or share information
  - despite our efforts, you have not been able to reach a resolution of your complaint and we consider that further time and effort in handling the complaint will not assist with achieving a resolution
  - you advise us that you no longer wish to pursue the complaint, or
  - despite our efforts, you cannot be contacted by us to discuss the complaint.
27. The Commissioner may decide to also stop handling a complaint for other reasons. These include where:
- you have not provided sufficient documentation or evidence by a stated time for there to be a meaningful discussion of the complaint between the parties
  - the Commissioner has written to you seeking information, advice or an update from you within a time period stated in our correspondence and we have not received the required response from you
  - you have engaged legal representation to handle your complaint
  - you have made threats to our Office or respondents to the complaint
  - your behaviour has been unreasonable and detrimental to the objective of reaching a resolution to the complaint.
28. When we close the file on an accepted complaint, we will advise you of this and explain our decision. We will outline how you can seek review. We may also inform the other party, if required.
29. If we determine that you have raised new material issues or provided relevant new evidence after your complaint has been closed, we will respond accordingly and re-open your complaint.

## Review of complaint handling process

30. At the request of a complainant, the Commissioner may review how a complaint was handled by the Office to confirm whether the complaint has been handled in accordance with this Complaint Handling Policy. The Commissioner will inform the complainant of the outcome of the review. The Commissioner may also inform any other parties, if required.
31. If the complainant remains dissatisfied with the outcome of the Commissioner's review or the handling of their complaint, the Commissioner may suggest that the complainant contact the Commonwealth Ombudsman. More information on the role of the Commonwealth Ombudsman is available at: <http://www.ombudsman.gov.au/making-a-complaint>

## Respect

32. We expect that all parties to a complaint will communicate with us and with each other in a professional, courteous and non-threatening manner. We take a serious view of communications that contain offensive, rude, abusive or threatening material. In these cases we may take a number of steps, including:

- suggesting that a party only communicate to the Commissioner in writing
- editing information that we have received to remove offensive or abusive comments
- not responding to communications that contain offensive or abusive comments
- stop handling the complaint, or
- report issues of concern to a higher level of management or to an external agency or regulator, the police or a law enforcement agency.

## Feedback

33. We welcome feedback and will consider any comments or suggestions regarding our Complaint Handling Policy or process. If you would like to provide feedback, please contact our Office via the contact details available below.

## Contact details and website:

**Email:** [nwfc@environment.gov.au](mailto:nwfc@environment.gov.au)

**Toll free number:** 1800 656 395

### Mail:

Office of the National Wind Farm Commissioner  
PO Box 24434  
Melbourne VIC 3001

**Website:** [www.nwfc.gov.au](http://www.nwfc.gov.au)

Our website has a range of resources that may be of assistance, including our *Guide to Conciliation*, which can be found at <https://www.nwfc.gov.au/publications/guide-conciliation-meetings>.



## APPENDIX C – INFORMATION HANDLING POLICY



### Office of the National Wind Farm Commissioner

#### INFORMATION HANDLING POLICY

(Version 2 – 4 December 2018)

#### Introduction

1. A key role of the Office of the National Wind Farm Commissioner (“the Office” or “we”) is to receive complaints from concerned residents regarding proposed or operating wind farm facilities, large scale solar farms (5 MW or more) and energy storage facilities, such as large scale batteries (1MW or more), and to assist the parties to the complaint to facilitate a resolution where possible. Complaints are received, accepted and handled in accordance with the Complaints Handling Policy at [www.nwfc.gov.au](http://www.nwfc.gov.au).
2. All information received by the Office for the purposes of handling complaints will be managed by the Office in accordance with this policy, the Commonwealth *Privacy Act (1988)* and the Department of the Environment and Energy’s Privacy Policy at: <http://www.environment.gov.au/privacy-policy>.

#### Information we collect and store

3. We may record relevant information provided by complainants, including:
  - their name, address and contact details (including telephone and email)
  - complaint information and evidence provided in support of the complaint
  - the history of the complaint, including relevant correspondence
  - the outcome being sought in relation to the complaint
  - other information provided by the parties in relation to the complaint.
4. For each enquiry or complaint that we deal with, we may keep a record of:
  - our contact with the resident and the other parties to the complaint
  - any verbal or written authority given for another person to act as a nominee on behalf of the resident
  - correspondence we have received and sent
  - information received from the resident and the other parties
  - issues raised and information discussed, both internally and externally.

5. We will make every effort to protect this information from unauthorised disclosure. We record information, in electronic form, in a secure Complaint Management System provided by the Department of the Environment and Energy and may also keep hard copies of documents.

### **How we will disclose information**

6. We may share information provided to us and other information relating to complaints with a range of third parties. Reasons and examples include:
  - a) Information may be shared with another party to a complaint in order to give them an opportunity to respond to the information where, in our view, the sharing of information will help in the resolution of the complaint. As part of lodging a complaint, complainants will need to give consent to our discussing the complaint and sharing the information they provide with other parties relevant to the complaint. We may also ask the other party to contact you directly to engage in a discussion or convene a meeting with you to allow the other party to better understand the issues and/or directly resolve the complaint.
  - b) We may also provide information to government agencies where the complaint is best handled by referral to a State or Local Government department or agency in accordance with our Complaints Handling Policy.
  - c) We may also provide some complaint and enquiry information to other organisations where we need to report issues to an external agency or regulator, the police or a law enforcement agency. We will not necessarily ask for permission to share information in these circumstances.
7. If we need to disclose personal information with a third party in a way that is not contemplated by the Commonwealth *Privacy Act (1988)*, our Complaints Handling Policy or by this policy, we will seek your consent prior to sharing the information.
8. Where a party has received information disclosed by the Office, the third party is required to handle and store the information consistent with any privacy laws that apply to them.

### **Confidentiality**

9. In dealing with a complaint, we may facilitate information sharing between the parties to assist in seeking a resolution or outcome.
10. Information exchanged between parties during meetings arranged by the Office is not confidential, unless the parties agree otherwise. If a party asks to keep specific information confidential, the party will need to clearly identify such information and the conditions for disclosure of the information to any other party. Parties may agree to enter into confidentiality agreements during the Complaint Handling Process, however the Commissioner will not be bound by such agreements.
11. When a party requests that information is kept confidential, we will inform them of any impact this may have on the resolution of the matter. Such restrictions may impact on our ability to further assist with the

resolution of the complaint.

## **Privacy**

12. Some of the information that we collect and store may contain personal information. We will handle personal information consistent with this policy, with applicable Australian privacy laws and the Department of the Environment and Energy's Privacy Policy at:  
<http://www.environment.gov.au/privacy-policy>.
13. If a complainant does not wish for the Office to use or disclose personal information, the complainant will need to make this clear to us when providing the information. We may advise the complainant if we think that this will limit the way in which we can assist them with their complaint.
14. Regardless of whether or not a complainant or person consents to any disclosure of personal information, we may disclose the information to relevant third parties where permitted under the *Privacy Act (1988)*. These third parties may include other parties to the complaint, law enforcement bodies, or a House or Committee of the Australian Parliament.

## **Requests for the release of information from our records**

15. When a third party requests information from our records, and the circumstances are not covered by this policy, we will be guided as to whether the information should be released by applying the *Freedom of Information Act (1982)*.