

Minutes

Company: Pacific Hydro Pty Ltd
ACN 057 279 508

Meeting: Cape Bridgewater Community Consultative Committee (CCC) Meeting No. 2

Date: Wednesday 9 October 2013

Time: 6-7.30pm

Location: Bridgewater Surf Life Saving Club

Attendees: Lane Crockett – GM Australia, Pacific Hydro
Katherine Teh-White, Futureye
Andrew Richards – Executive Manager Gov & Corporate Affairs, Pacific Hydro
Dan Griffin, Marshall Day Acoustics (invited guest)
Cape Bridgewater and Cape Nelson Residents

Welcome and Introductions

A small number of Cape Bridgewater residents were in attendance as well as residents from the Cape Nelson project due to concerns about how close their homes were to turbines proposed in the new project. The impacted residents at Cape Bridgewater aren't attending the meetings and Cape Bridgewater residents questioned the need for the CCC to proceed unless the impacted residents attend.

The Minutes from the previous meeting were accepted.

Value of wind energy

GM Australia for Pacific Hydro, Lane Crockett, former oil and gas executive provided background about his views of wind energy compared to other energy sources. Lane acknowledged that there may be some negative wind farm issues such as concerns about noise and visual impact however Lane also pointed out that Pacific Hydro have wind farms such as Codrington and Challicum Hills wind farms where there has never been any concerns expressed.

Lane spoke about wind energy also being a variable producer of energy due to varying wind speeds. Lane also confirmed there are some reports of complainants linking health issues to wind farms. On the positive side, Lane advised there are no emissions from wind farms, they have a low environmental impact, that wind power is lowest cost renewable energy source we have, that it doesn't use water, it's safe from accidents, and it is drought proofing properties for farmers.

There were questions on how demand and supply for wind energy was being dealt with by the grid and Lane explained how the Australian Energy Market Operator (AEMO) operated to balance the system.

Executive Manager for Pacific Hydro, Andrew Richards described the Australian Wind Forecasting System that has been in place for almost 10 years that has proven to be 99%

accurate when predicting energy generation from wind farms. This information has been vital for AEMO and allows them to incorporate wind energy into the energy system, ensuring all generation in the market is utilised to its maximum efficiency

Impact of wind turbines (Dan Griffin, Marshall Day)

Dan Griffin of Marshall Day Acoustics, noise experts, discussed the noise study it is planning with Pacific Hydro including the permanent noise data loggers that they will be installing at Cape Bridgewater as part of a trial.

Dan described how human beings received noise and the links between noise and the environment that changes the way we receive sound. Dan reviewed locations for permanent noise logging and is open to engagement with residents about locations. Invitations to engage have been issued to highly impacted residents. For the best results the noise logging needs to be accompanied by a resident diary so that the acousticians can look for specific circumstances that might impact on the residents and what is causing concerns for them.

Action: The impacted residents will be asked to capture data such as what they hear, what they feel and the time and that information will be correlated with what the permanent noise logger captures in terms of noise. An example diary template is **attached**.

Action: Dan will follow up with one of the Cape Nelson residents about what makes noise in transmission of electricity.

Responsiveness to concerns

Complaints system – Andrew Richards provided an update on Pacific Hydro's draft complaints system currently under review. Andrew reported on the seven complaints from one resident.

Engagement with concerned residents - a process of engagement to define a noise/health/sleep study has begun but there have been some issues arising to progress the study. Lane Crockett has been talking with Steven Cooper to define a study and there is an opportunity to invite Steven to come to the CCC meeting in November however it requires a commitment from the concerned residents to actually participate to define the scope.

Studies report -

EMF study - Pacific Hydro agreed to undertake an EMF study by a concerned resident. Details have been given to the resident of the supplier that Pacific Hydro would fully fund. The action is now with the resident to undertake the study and report on results. The resident was not in attendance and as far as Pacific Hydro understands has not taken up the opportunity.

Water testing for hydrocarbons/chemicals/pesticides - Pacific Hydro agreed to undertake an EMF study by a concerned resident. Details have been given to the resident of the supplier that Pacific Hydro would fully fund. The action is now with the resident to undertake the study and report on results. The resident was not in attendance and as far as Pacific Hydro understands has not taken up the opportunity.

Scoping a noise/health study was requested by three concerned families - Pacific Hydro agreed to pay for the study as long as it was jointly scoped with its acousticians, the acoustician selected by the families, Steven Cooper, the families themselves and the company so there were shared objectives, agreed actions based on results of the study. Lane Crockett has been talking with Steven Cooper to define a study and there is an opportunity to invite Steven to come to the CCC meeting in November however it requires a commitment from the concerned residents to actually participate to define the scope.



Action: Liaise with and obtain RSVPs from concerned residents to participate in the CCC Meeting in November and agree Steven Cooper is attending based on residents' attendance.

The correspondence on this matter from Senator John Madigan and Steven Cooper is **attached**.

Portland project, Cape Nelson North

Andrew Richards provided an overview of the upcoming construction of second stage of wind turbines in Portland. It turns out that the update on the approval that was sent to the residents included an old map. An apology has been sent and an updated map with the locations of the turbines has been issued to Cape Nelson residents.

End.

Sample diary record

| Date | Time | Description of noise: - including any unusual characteristics of the noise – for example was it high or low pitched, constant/intermittent, irregular sound that changed from high to low pitch, its volume (very loud or quiet or something else) | Wind conditions - Was it especially windy or still? - Did you notice the wind direction? - Was it an unusual wind condition that does not occur very often or is it common | Did you hear it in your home or somewhere else? | Have you heard this noise before? |
|-----------------|------|---|---|---|-----------------------------------|
| <h1>SAMPLE</h1> | | | | | |
| | | | | | |

26 August 2013

Senator John Madigan
17 Albert St
BALLARAT
VIC 3350

By email: senator.madigan@aph.gov.au

Dear Senator Madigan

Cape Bridgewater

Thank you for your letter dated 13 August 2013 in relation to supporting noise testing at Cape Bridgewater for the three families that signed your attached letter - [REDACTED] and [REDACTED] as well as [REDACTED]

We have attempted to or have spoken with these residents in recent weeks and, at a community meeting on 5 August, we made a commitment to undertake testing to identify the cause of the problems that they have complained of. We committed to the following actions as a minimum:

- further noise testing, using an acoustician of the residents' choosing, EMF testing and water testing (where appropriate);
- regular monthly meetings; and
- ongoing public accountability.

While the EMF and water testing will be relatively straight forward and we will put forward NATA accredited services providers for the residents to choose a consultant who can undertake the EMF testing.

In order to undertake further noise testing it is not viable for there to be no consultation with residents.

The reality is that each household has raised very different issues which will require negotiation to ensure that any further study identifies their area/s of concern. We want the study to be designed in a way that will resolve the issues and provide a clear path forward for all parties. Additionally, without collaboration any additional study may not have any credibility with the residents – as per our previous infrasound study conducted in 2010 in which there was no collaboration.

We have demonstrated compliance with noise regulatory standards at the Cape Bridgewater wind farm, however we recognise that noise events could be the issue for individual families where audible noise concerns have been raised. We hope that further noise testing will isolate these events so we may determine under what conditions they occur, enabling us to put in place measures to mitigate them.

I have had an initial conversation with Steven Cooper about the prospect of Pacific Hydro engaging him to conduct noise testing for residents at Cape Bridgewater. We discussed the process for collaborating and the residents' concerns in relation to noise and vibration.



PacificHydro

It is likely that some of the requirements listed in pages 3 to 5 of the attachment to your letter may form part of the proposed scope.

We note that regulatory compliance settings determine the average results. We are looking to develop an assessment approach with the residents and their preferred acoustician to measure the noise and/or vibration events that neighbours experience with the intention of better understanding the source and levels.

It must be recognised that available tests and standards differ for audible, low-frequency and inaudible (infrasonic) noise and for special audible characteristics. Some methods and standards are not well established or accepted in the acoustic field, while others may not provide clear results for the concerns that the residents may have.

In addition to committing to further noise testing for the [REDACTED] and [REDACTED] families, we have also committed to a number of 'beyond compliance' steps. These include making our existing noise compliance reports public – we will advise you when this occurs. Additionally, we are planning to conduct a permanent noise monitoring pilot study. Details of the pilot study remain at an early stage, but essentially would incorporate permanent noise data logging, analysis and regular ongoing public reporting. We are committed to pursuing this study in the interests of providing a higher level of information transparency and improving community and public accountability.

We thank you for assisting in the collaboration between the company and the neighbours of the Portland wind farm. We appreciate that you are able to play a role which can help build trust between us and we hope that your assistance will be pivotal in developing a new level of industry transparency and accountability.

Yours sincerely

Lane Crockett
General Manager, Australia
Pacific Hydro Australia



JOHN MADIGAN
Democratic Labor Party Senator for Victoria

Attn: Mr Lane Crocket

CEO Pacific Hydro
Pacific Hydro Australia
Level 11, 474 Flinders Street
Melbourne Victoria 3000 Australia

Dear Mr Crockett,

RE: Conditions of noise compliance testing at Cape Bridgewater.

I understand that Pacific Hydro has kindly agreed to fund independent noise testing at several properties surrounding the local wind farm.

Today constituents from Cape Bridgewater have asked me to forward to you the following correspondence. I am very pleased to do so, on their behalf.

Please find enclosed a copy of their co-signed letter describing noise testing conditions that the community would like to see employed.

Kind regards,

A handwritten signature in black ink that reads "John Madigan".

Senator John Madigan

13/08/13

Monday, August 12th, 2013

Mr Lane Crockett
CEO
Pacific Hydro

Re: Cape Bridgewater residents adversely impacted by the Wind Development

Dear Mr Crockett,

We have asked Senator John Madigan to convey this letter to you on our behalf, and we ask that he is kept fully informed of progress. As you know, Senator Madigan has taken a keen interest in our welfare, and in the wind turbine noise issues.

Thank you for the public apology and the private apologies you have given to some of us. Thank you for the personal commitment you have given to address the problems, in particular the noise and vibration from Pacific Hydro's wind turbines.

There are three serious pollution problems, to varying degrees, in each home which need a thorough independent investigation. They are:

1. Noise and vibration pollution
2. Electrical pollution
3. Water contamination, presumed from gearbox oil landing on roofs and in water tanks

We would like all three problems independently and objectively assessed, so that we all have a better understanding of the extent of the problems, before there is any discussion about possible solutions for each of us.

We require that the data is made freely available to all stakeholders, and that there are no attempts to try and hide the data or buy people's silence as has happened at other wind developments in Australia. Such agreements further divide already shattered communities and is not an approach acceptable to us. Enough damage has been done.

Nor do we want meetings with Pacific Hydro or Futureye until the noise testing is conducted and the results are in.

We accept your offer to pay for independent expert acousticians of our choice to independently assess the problem, providing the conditions listed below are met. We note your stated commitment to research, mentioned in the second Federal Senate inquiry and mentioned by Senator Doug Cameron and we welcome that approach, and commend you and Pacific Hydro for it.

The following acousticians/researchers have offered their services to us, and are keen to assist with collaborative independent data collection at Cape Bridgewater. They all have different expertise and equipment, and we can see the value in having as many of

them as possible involved for an intense data collection period together, especially for the "on off" testing which will be required to determine what is background noise and what is not. They are all experienced in gathering data from other wind developments, and we trust their professional integrity, expertise and independence. The first three have all collected data previously from Cape Bridgewater.

Steven Cooper, from the Acoustic Group, NSW
drnoise@acoustics.com.au 02 9555 4444 or 0416 263 341

Les Huson, from Les Huson & Associates, Victoria
les@huson.com.au 03 5427 1442 or 0416 143 716

Dr Bob Thorne, from Noise Measurement Services, QLD
bthornenms@gmail.com 07 3355 9707 or 0410 621 850

Emeritus Professor Colin Hansen, Adelaide University
colin.hansen@adelaide.edu.au 0427 180 769

Both Dr Bob Thorne and Professor Colin Hansen have co-researchers who have indicated an interest and who will bring other vital skills, equipment and knowledge with their involvement, which will be of great benefit to investigating the problems.

We also welcome the opportunity for in home sleep research to be carried out concurrently with acoustic monitoring and there are a couple of sleep physicians/physiologists who have expressed an interest in this sort of research. This was part of the research recommended as a priority by the second Federal Senate inquiry. There is also an audiologist who has expressed his interest in doing testing while the turbines are operating.

We think this would also be of great value, and in facilitating this sort of data collection, Pacific Hydro could be world leaders in being responsible wind developers. This could also start to help repair the damage to Pacific Hydro's own reputation by your company's treatment of us to date.

With respect to independent assessment of water quality / contamination issues and electrical pollution assessments we do not yet have the names of people with the best expertise in this area who might be available to help but will let you know in due course who we have identified.

With respect to the wind turbine noise assessment, we ask that the following conditions are met by Pacific Hydro, and would like the agreement between us and Pacific Hydro to be in writing. We also ask that other affected residents are given the opportunity by Pacific Hydro for such testing to be conducted at their homes as well.

We are aware of a number of families who have been adversely impacted locally but because of the vitriolic nastiness directed at us, and the local politics or issues with their current employer, they have been reluctant to speak out or complain about the impact of the wind turbine noise. Portland is a company town, and those of us who have spoken out have been targeted in a variety of ways, so others have understandably kept their mouths shut and suffered in silence. This has compounded the trauma for everyone.

CONDITIONS

Noise testing & compliance, provision of data etc

1. Pacific Hydro Pty Ltd ("the permit holder") has agreed to satisfy the ongoing complaints of locals ("the complainants") adversely affected by turbine noise and vibration from turbines operated by the permit holder at their homes and properties by paying the cost of independent acoustic monitoring by acoustic experts of the complainants' choosing.
2. The independent acoustic monitoring referred to in 1 above shall be carried out by appropriately qualified acoustic engineers ("the complainants' experts").
3. For the purpose of the independent acoustic monitoring referred to in 1 above the permit holder shall provide at the permit holder's cost wind speed and direction data, namely MetMast wind speed and direction data, including the time basis used as it relates to GMT and the location coordinates of the MetMast in question and for such periods as required by the complainants' experts.
4. The permit holder must on written request from the complainants' experts provide the complainants with the following data, records and information:
 - 4.1 all noise data gathered by the permit holder relevant to the complaints and in relation to that data:
 - 4.1.1 coordinates of the location of the noise logging equipment used to gather that data and photographs of same;
 - 4.1.2 details of the type and calibration of the equipment used, including calibration certificates;

- 4.1.3 with such data time stamped relative to GMT and labelled to identify the source and nature of each type of data so that the noise data can be related to wind speed and direction data;
- 4.2 wind speed and direction data, namely:
 - 4.2.1 MetMast wind speed and direction data, including the time basis used as it relates to GMT and the location coordinates of the MetMast in question;
 - 4.2.2 turbine nacelle wind speed and direction data, indicating the time basis used as it relates to GMT and the turbine number relevant to the wind farm site plan;
- 4.3 power output (production) data (ie SCADA data), indicating the time basis used as it relates to GMT and the turbine number relevant to the wind farm site plan

("the noise compliance data").
5. The permit holder shall provide the noise compliance data:
 - 5.1 to the complainants at the cost of the permit holder;
 - 5.2 when stored in electronic form copied to a portable storage format such as a DVD or Hard Disc;
 - 5.3 to the satisfaction of the complainants' experts;
 - 5.4 continue to provide the noise compliance data until the complainants' experts are satisfied that the levels recorded at the complainants' residences satisfy the criteria from time to time applicable to noise levels from the wind energy facility; and

- 5.5 the noise compliance provided by the permit holder shall become the property of the complainants for their use and benefit absolutely.
6. For the purpose of satisfying the complaints the permit holder shall at the written direction of the complainants' experts and at the time and for the periods specified in that direction:
 - 6.1 shutdown all wind turbines within the wind energy facility;
 - 6.2 operate all wind turbines within the wind energy facility; and
 - 6.3 continue to follow the directions above until the complainants' experts are satisfied that the levels recorded at the complainants' residences satisfy the criteria from time to time applicable to noise levels from the wind energy facility.
7. That the complainants' experts are to prepare and provide to the complainants, the responsible authority and the permit holder a copy of a report as to the complaints and as to whether the levels recorded at the complainants' residences satisfy the criteria from time to time applicable to noise levels from the wind energy facility.
8. That upon receipt of a report from the complainants' experts that the levels recorded at the complainant's residence do not satisfy the criteria from time to time applicable to noise levels from the wind energy facility the permit holder shall forthwith shut down so many of the turbines as are necessary to reduce noise levels to a level that satisfies the applicable criteria and the turbines will remain shut down until the responsible authority is satisfied upon evidence generated by the complainants' experts that the relevant criteria are being satisfied when the turbines are in operation.

We look forward to your response to our letter, in writing, at your earliest convenience, and to the independent assessments of the water contamination, electrical pollution and full spectrum noise testing being conducted.

Once the pollution problems have been clearly described, discussions about possible solutions can begin.

Yours sincerely,

