New Zealand Wind Energy Industry Health and Safety Programme

Overview: Guidelines for Senior Management

September 2016

Unrestricted

Foreword

Ensuring the health, safety and wellness of its people is the most important priority for any business. Given the risk associated with the electricity industry and wind farms it is encouraging that practices and procedures for managing health, safety and welfare (HS&W) on windfarms are now well developed globally. These guidelines draw on international experience and integrate this with the relevant New Zealand legislation.

Industry best practice includes the open sharing of information on health and safety. The key principles being that there is no competitive advantage in health and safety and that collectively we can achieve more. It is in the interest of every company and the industry as a whole to openly share information.

The target for this document is senior management as a guide to champion HS&W. It is however recognised that achieving a cultural shift whereby we all demonstrate leadership in HS&W is the goal. Contents include high level principles for health and safety and identifies the key issues that senior management needs to focus on. It provides guidance on the actions and systems that should be in place to ensure a safe working environment.

Over the next few years the wind industry will assess the merits of providing more detailed guidance and rules for specific aspects of wind farm management. Topics to be considered include:

- Site development and planning.
- Design, specification, manufacture and assembly.
- Construction, commissioning and demolition.
- Operation and maintenance.
- Activities related to aspects of wind farm development and management, such as cranage.

Subsequent guides would be more widely targeted with the objective of developing best practice and driving consistency and efficient approaches across the industry.

This September 2016 update reflects recent changes in legislation. Similarly we expect practitioners in the wind industry to continue to innovate and develop even better ways of staying safe and working more efficiently. NZWEA will work across the industry to facilitate the sharing of learning and best practice and will update this and other health and safety documents as practices, technology and legislation evolves.

NZWEA thanks members for their absolute commitment to take all possible steps to ensure our people get to go home safely.

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1. Introduction

The New Zealand Wind Energy Association (NZWEA) was established to promote the uptake of wind energy in New Zealand as a reliable, sustainable clean and commercially viable energy source. NZWEA acts as a central point for information sharing. The Association researches and proposes solutions to current issues and generally acts as the forum for the New Zealand wind industry. NZWEA is committed to promoting the use of wind energy in New Zealand as an economically viable and environmentally sound complement to existing energy generation.

In October 2011 NZWEA established a group dedicated to Health & Safety in the Wind Industry in New Zealand. The goal of the Health & Safety Group is to ensure our people get to go home safely. We do this by:

- acting as an information sharing forum for NZWEA members.
- communicating safety best practice and to highlight safety issues to the NZWEA membership.
- facilitating the development of safety best practice.
- safeguarding those working in the industry through the use of safety alerts, lessons learnt documents and information.
- engaging with regulators, statutory bodies and other organisations to share understanding and best practice.

NZWEA recognises the importance of establishing high standards for health and safety at every stage of a wind energy project. All participants in the industry should promote high standards through the selection and management of the whole of their supply chain, including designers, manufacturers, contractors and operators.

Members of the wind industry are expected to adhere to the highest standards and ensure that contracts for design, procurement, construction, commissioning and operation are written so as to promote safe practices and avoid clauses that may compromise health and safety. A focus on health and safety at all levels is fundamental to the development and maintenance of a strong safety-first culture within the industry.

A commitment to good practice requires that throughout the life cycle of a wind farm steps are in place to ensure that the workforce is involved in improving health and safety standards so far as is reasonably practicable. Methods for involving the workers in improving health and safety include appropriate worker participation processes, worker consultation, suitable training, competence assessments and by ensuring adequate supervision.

NZWEA welcomes feedback on its published material and readers are encouraged to forward comments and suggestions for future revisions to the offices of the NZWEA.

2. The nature of the guidelines and target audience

These guidelines are intended to be relevant to all organisations contributing to the life cycle of wind farms (from initial feasibility studies through to decommissioning). The focus of these guidelines is relevant senior management within organisations that are developing, constructing or operating wind farms, or are considering becoming involved in the sector.

These guidelines provide senior management with relevant information to ask the necessary questions in relation to health and safety to satisfy themselves that their organisation is promoting good standards of health and safety within the wind industry.

Over time more specific documents will be developed that focus on specific aspects of wind farms, such as site development and planning, assembly of components, construction and commissioning. These guidelines are not intended to provide in-depth advice and guidance on all aspects of Health and Safety in relation to the design, construction, commissioning, operation, maintenance and removal of wind turbines. Nor are they designed to replace existing health and safety guidelines, regulations or approved codes of practice.

Satisfying the requirements of these guidelines should not be viewed as an indication of total compliance with the law[1]. There is no substitute for knowledge of individual duties and legal requirements.

Where any organisation does not have the necessary knowledge, competence or resources available to it specialist advice should be sought from independent third parties and consultants.

[1] A list of Health and Safety guidance publications applicable to New Zealand can be found at the Worksafe NZ website, www.worksafe.govt.nz.

3. Principles of successful health and safety management

3.1. Safety principles: Beginning with the end in mind

The New Zealand wind energy industry has the vision of having: A properly managed safety culture where people in the industry participate actively in training, identify and alert each other and management to potential hazards, and feel a responsibility for their safety and the safety of others.

The practical application of achieving a strong safety culture is the implementation of effective safety systems. A safety system's success is dependent upon the people involved in both its administration and its implementation and their clear understanding of the purpose of the system. At the centre of all safety systems should be the fundamental understanding that the system's primary function is the protection of people associated with the industry, both their lives and their wellbeing. The eight generic principles of workplace safety set out in Box 1 provide the overall framework for these guidelines.

In meeting the vision of achieving an effective safety culture each organisation, company, and individual needs to meet their legislative requirements with regards to health and safety. The primary Acts of legislation which govern health and safety in New Zealand are the Health and Safety at Work Act, 2015 and associated regulations. These are discussed further in section 4. The following points are key themes in the legislation and these relate to a number of the principles above:

The emphasis of the law is on:

- Protecting workers and other persons against harm to their health and safety and welfare by eliminating or minimising risks arising from work
- Providing for fair and effective workplace representation, consultation cooperation and resolution of issues

Box 1: Generic principles of safety[2]

1. Safety is an Ethical Responsibility

At its core, ethics hold up a positive vision of what is right and what is good. It defines what is "worth" pursuing as guidance for our decisions and actions. Workplace injuries and deaths are too often seen in the abstract as statistics. It is our ethical responsibility to do what is necessary to protect employees from death, injury, and illness in the workplace. This is the only foundation upon which a true safety culture can be established in any workplace.

2. Safety is a Culture, Not a Program

The combined commitment and participation of the entire organisation is necessary to create and maintain an effective safety culture. Every person in the organisation, from the top management of the corporation to the newest employee, is responsible and accountable for preventing injuries.

3. Management is Responsible

Management's responsibility is to lead the safety effort in a sustained and consistent way, establishing safety goals, demanding accountability for safety performance, and providing the resources necessary for a safe workplace. Managing safety is the responsibility of every supervisor, from the first line supervisor to the Chairman of the Board.

4. Employees Must Be Trained to Work Safely

Awareness of safety does not come naturally; we all need to be trained to work safely. Effective training programs both teach and motivate employees to be a productive part of the safety culture.

5. Safety is a Condition of Employment

The employer must exhaust every reasonable means to lead, motivate, train, and provision employees to maintain a safe workplace. But, in the event the employee refuses to take the actions required to work safely, the employer must utilise a system of progressive discipline to enforce safety requirements and ensure the cooperation of the employee or the removal of the employee from the workplace in order to protect the employee and their co-workers.

6. All Injuries Are Preventable

Sometimes accidents occur without the apparent indication of fault or blame. But there is always some chain of events that occurred leading up to the accident that, if the eventual outcome had been realised, someone could have interceded. The fundamental belief that injuries are, by their nature, preventable is a catalyst that encourages the prevention of further injuries.

7. Safety Programs Must Be Site Specific, with Recurring Audits of the Workplace and Prompt Corrective Action

The purpose of the workplace audit is to discover and remedy the actual hazards of the site before they can injure workers. Recurring hazard analyses, comprehensive inspections, and aggressive investigation of accidents or near misses, discover potential workplace hazards and identify weaknesses in safety plans, programs, policies, and procedures. Safety regulations and generic safety programs are not sufficient means to discover hazards because they are not specific to the individual workplace. A safety audit program is site specific. Whenever a safety deficiency is found, prompt action is required both to overcome the hazard and to reinforce the message that safety is a priority.

8. Safety is Good Business

Reducing workplace injuries and illnesses reduces the costs of workers' compensation, medical expenses, potential government fines, and the expenses of litigation. Effective workplace safety is not an expense; it is an asset.

[2] International Association of Safety Professionals: http://www.naspweb.com/safetyprinciples.php

3.2. Leadership and key questions for directors and Board members

The third principle above relates to leadership which is a critical aspect of health and safety. There are three key reasons why Directors and Board members need to show leadership for health and safety:

1. Protecting the health, safety and welfare of employees, and that of members of the public who may be affected by their activities, is an essential part of risk management and must be led by the Board. H&S needs to be considered alongside other risks at the Board level.

2. Failure to include health and safety as a key business risk in Board decisions can have catastrophic results. Many high-profile safety cases over the years have been rooted in failures of leadership.

3. The Health and Safety at Work Act 2015 places specific duties on businesses (PCBU's) and due diligence duties on officers in ensuring that the PCBU is meeting its health and safety responsibilities.

Leadership also strongly relates to the first two principles; safety is an ethical responsibility and safety needs to be part of an organisation's culture. Directors and Board members have an important role in relation to these principles. A further reason for Board interest in health and safety is that safety is good business (principles 8). Questions for Directors and Board members to consider are set out in Box 2.

Box 2: Key questions for Directors and Board members to consider

1. How do you demonstrate the Board's commitment to health and safety?

2. What do you do to ensure appropriate Board-level review of health and safety?

3. What have you done to ensure your organisation, at all levels, including the Board, receives competent health and safety advice?

4. How are you ensuring all staff, including the Board, are sufficiently trained and competent in their health and safety responsibilities?

5. How confident are you that your workforce, particularly safety representatives, are consulted properly on health and safety matters, and that their concerns are reaching the appropriate level including, as necessary, the Board?

6. What systems are in place to ensure your organisation's risks are assessed, and that sensible control measures are established and maintained?

In the HS&W Act there are specific duties for Person conducting business or undertaking (PCBU), officers, health and safety representatives, workers and other persons.

Officers, of a PCBU are given specific duties under the Act and are, liable to prosecution if they "direct, authorise, assent to, acquiesce in, or participate in" a failure to comply with their duties under the Act. Prosecution can result whether or not the PCBU is prosecuted.

The management of the system comes from the PCBU and its officers and it is expected that each question in Box 3 is answered positively for the organisations within the New Zealand wind energy industry.

Box 3: Questions relating to active management commitment to health and safety

Questions	Expected answers
Is there a policy in writing that reflects the PCBU's commitment to the health and safety of workers and others?	The policy: ▪ Outlines responsibilities. ▪ Is widely distributed and known by staff. ▪ Is current.
Are annual health and safety goals set by senior management?	The goals are: ▪ Based on an analysis of the strengths and weaknesses of the current health and safety programme. ▪ Action orientated with established time frames.
Have health and safety responsibilities been assigned?	▪ Responsibilities are built into job descriptions. ▪ People at all levels fully understand their responsibilities. ▪ Managers' and supervisors' health and safety performance assessed. ▪ Recognition given for positive performance. ▪ Corrective action taken as appropriate.
Is a regular review of the workplace being conducted to ensure hazard controls are effective, and to identify new hazards?	▪ Review process includes planned inspections. ▪ Activities are in place to encourage and enable employees to report new and existing hazards, and make suggestions for improvements.

3.3. Hazard identification and control of risks

The sixth principle of safety, that all injuries are preventable, is most effectively achieved when companies address the root causes of incidents.

Those root causes are unsafe conditions (hazards) and unsafe actions. Using a simple example of a worker climbing a ladder with a broken rung, we see a scenario for a preventable injury accident. The unsafe condition, the ladder, is compounded by the unsafe action, the worker climbing the ladder, or neglecting to inspect the ladder before using it. If the faulty ladder were to be identified as unsafe and removed from the site, the potential for harm from that source is reduced to zero.

Sources of harm within the industry need to be identified and effectively controlled. Where elimination of the hazard isn't reasonably practicable, the PCBU must minimise risks to health and safety, so far as is reasonably practicable by applying the hierarchy of controls (substitute, isolate, engineering controls, administrative controls and PPE).

The process for managing significant hazards is based on the principle that the workplace should be modified to suit people, not vice-versa. The steps are:

- *Identifying hazards* - involves recognising things which may cause injury or harm to the health of a person, for instance flammable materials, ignition sources, or unguarded machinery.
- *Assessing the risk*- involves evaluating whether the hazard is significant and the likelihood and degree of injury or harm occurring to a person if they are exposed to a hazard.
- *Eliminating the risk* - if it is not possible to eliminate the risk, then minimising it so far as is reasonably practicable, in accordance with the "Hierarchy of Controls" *Monitoring any exposure* - to a hazard that has been minimised.

The control of occupational injury and disease hazards should preferably be dealt with by design or redesign, substitution, separation or administration. These controls generally eliminate, isolate, or minimise hazards in a more reliable manner than personal protective equipment. Controls may reduce the significance of a hazard or the likelihood of it causing harm to workers or others.

Where regulations require specific methods to control the hazard, these must be complied with. It is important to regularly review the steps of risk management, especially if there are changes in the work environment, new technology is introduced, or standards are changed.

Answering positively to the questions in Box 4 is expected from organisations involved in the New Zealand wind energy industry.

Box 4: Key questions related to hazard identification and control of hazards

Questions	Expected answers/actions
Have all hazards been identified in a systematic manner with workers involved in the process?	▪ All workers had the opportunity to be fully involved. ▪ Identification was comprehensive and included all areas, processes, tasks and occupations. This may include a record of one or more of the following: o Physical inspections o Task analysis or other type of method statements o Process analysis o Analysis of accident investigation details. ▪ Where necessary, specialist advice has been obtained to ensure hazards have not been missed.
Have risks been assessed following the hazard identification exercise?	▪ Have critical risks been identified? ▪ All possible risks to the health and safety of workers and others were considered.
Have appropriate controls been identified, developed and documented for each significant hazard?	▪ All practicable steps have been taken to firstly eliminate and, if not practicable, have the Hierarchy of controls been applied: substitute, isolate, engineering controls, administrative controls and PPE. ▪ "Minimising" includes use of appropriate protective clothing and equipment, monitoring exposure and, where appropriate, obtaining consent to health monitoring. ▪ Results available to workers upon request.

3.4. Information, training and supervision

The prevention of injury accidents in the wind energy industry depends upon the people who not only direct the work, but actually perform the work on site. Their behaviours often determine the outcome of a day, whether it is with or without injury. The fourth and fifth Principles of Safety focus on the individuals in the work place. They must be *trained* to work safely and are *required* to work safely.

Some training may be as simple as onsite inductions, which make individuals aware of the existing hazards on site. Other training may be much more specific and rigorous, e.g. work at height courses that focus on the specific hazards of wind farms. Both examples have two fundamental elements: (i) the sharing of relevant information, and (ii) defining expectations of the individual.

Organisations within the New Zealand wind energy industry are expected to answer positively to the questions in Box 5.

Box 5: Key questions related to information training and supervision

Questions	Expected answers/actions
Are workers being provided with information on risks including critical risks to which they are exposed, or which they may create?	▪ Specific individual health and safety information needs have been identified. ▪ Information to workers is comprehensive in relation to hazards faced, including what to do if an emergency arises. ▪ All individuals have received and understand this information. ▪ Health and safety representatives have access to sufficient information about the health and safety systems to ensure that they can do their job effectively.
Have training needs been identified and analysed, to ensure that all workers are adequately trained in the safe use of all plant, equipment and protective clothing they may use or handle?	▪ Tasks analysed to ascertain specific health and safety hazards and associated training needs. ▪ Training register maintained. ▪ The location of all necessary safety clothing, devices, equipment, and materials is clear.
Is appropriate training provided where individuals do not have the necessary skills?	▪ Training provided by person with appropriate knowledge and skills. ▪ Training content and language is able to be understood by workers. ▪ Follow up action taken to ensure work is performed correctly. ▪ Training records maintained.
Are all workers who do not have the knowledge and experience required to perform a job or task adequately supervised by someone who does?	▪ Clear decisions made as to the degree of supervision required for individual workers, based on their knowledge and experience.

3.5. Audits

Auditing (principle 7) needs to be part of an effective safety system, in addition to tailoring safety programmes to the particular nature of the site. Audits are undertaken by organisations at different times for different purposes. In general audit activities fall into the following types:

1. *Prequalification audits for contractors*. These audits usually consist in a questionnaire form with further investigation if required. Usually they are reviewed by a safety professional. Information gathered this way can be reviewed against future contracts and need not be duplicated unless a significant time or change in company practice has occurred.

2. *System audits*. An example is the ACC workplace safety management practices (ACC WSMP) programme which involves an audit every other year. Company safety system reviews are typically done annually and report to their senior management and Board.

3. *Site audits- hazards, controls, site safety protocols, safe work methods*. These are audited at meaningful frequencies to ensure compliance with safety systems and obligations.

Box 6: Key questions relating to audit

Questions	Expected answers
Are there auditing systems in place at active construction sites?	▪ Monthly audits. ▪ A system in place for increasing frequency of audits if there are issues that require resolution.
Are there auditing systems in place at normal operating sites?	▪ Annual audits. ▪ Frequency increases if there are issues that require resolution.

3.6. Emergency procedures

It is important that all persons on site, whether it is in construction or a maintenance capacity, are aware of relevant emergency procedures. PCBU's that control the work sites should ensure effective emergency protocols and procedures are in place. It is a key requirement of the Health and Safety Work Act 2015 that where there are multiple PCBU's at a workplace, there be consultation, cooperation and coordination between all of them in managing health and safety. This will ensure that the procedures are robust in addressing the needs of all those working on site. For example: If there will be work at height done under fall arrest, there is a need for a height rescue protocol.

Box 7: Key questions relating to emergency procedures

Questions	Expected answers
Are other relevant PCBU's involved in the development of procedures for dealing with emergencies?	▪ Other trades have had the opportunity to contribute ideas and suggestions on possible emergencies, and procedures for dealing with them.
Does the emergency plan clearly identify responsibilities and procedures to be followed?	▪ The emergency plans are in writing. ▪ All of the likely emergency conditions have been identified. ▪ A coordinator has been appointed. ▪ All persons on site, including visitors, will be accounted for.
Have all workers to the site received training in relevant emergency procedures?	▪ Training such as emergency first-aid and resuscitation. ▪ Training needs to relevant to the degree of risk and time lapse for professional medical aid to arrive.
Emergency procedures are prominently displayed (appropriately for the site).	▪ Combined with at least an annual review of overall emergency procedures

3.7. Person conducting business of undertaking (PCBU)

The work relationship where one company hires another to complete tasks is very common in New Zealand. It is expected that much of the work within the wind energy industry would be performed under this contractual arrangement, rather than one employer and their workers doing the bulk of the work required for a site.

Positive answers to the questions set out in Box 8 will ensure that principals within the wind energy industry are meeting their basic requirements to ensure a safe environment on site.

Box 8: Key questions relating to principals, contractors and subcontractors

Questions	Expected answers/actions
Have the owner(s) of the site identified all of the PCBU's involved in their enterprise?	▪ An identification has been made of situations where this relationship applies.
Have steps been taken so far as is reasonable practicable, to determine that no worker- is harmed?	▪ Health and safety performance requirements written into contracts. ▪ A criterion for the selection of contractors and sub-contractors includes past health and safety performance. ▪ Contractors submit a plan on how they intend to manage health and safety in line with the Health and Safety at work act, i.e. incorporating key responsibilities. ▪ There is a planned induction of all contractors and sub-contractors. ▪ The PCBU in control of the workplace has activities in place to monitor the health and safety performance of contractors, and standards are enforced.

3.8. Management of Change – a critical time for health and safety

Temporary and permanent changes to an organisation, personnel, systems, procedures, working methods and practices, equipment and materials may be planned or unplanned. Although every effort should be made by designers and others to identify appropriate work methods (including assembly instructions and equipment to be used) and control measures to eliminate risks and to minimise the need for change, unexpected or unforeseen events or situations may still arise at any stage throughout the wind farm cycle. These events and situations may require unplanned changes to be implemented quickly which, if not managed effectively, may significantly increase risk to health and safety.

Whether changes are planned or unplanned it is important to ensure that their potential impact on health and safety is properly assessed, so that hazards or risks associated with the change are identified and effectively managed.

Organisations should develop an effective management of change process, which is capable of being implemented across all aspects of wind farm development and operation, to enable changes to be effectively managed into the workplace. This process should consider:

1. The methods and work required to be changed.
2. The methods and work required to implement the change.
3. Additional equipment required to be used to implement change or that which is required to be introduced as a result of the change.
4. The review and, where necessary, revision of existing risk assessments.
5. The review and, where necessary, revision of existing safe system of work, method statements and work instructions.
6. Any additional control measures – organisational, procedural, engineering controls and/or PPE, necessary to implement the change and/or required to be introduced as a result of the change.
7. The issuing of modified information and instruction.
8. The re-training of personnel involved with the work.
9. The allocation of sufficient time and resources to implement the change.

4. Legislation and Standards

4.1. Health and Safety legislation relevant to wind farm projects

There are specific duties defined in the Health and Safety legislation in New Zealand for the various roles people may have in a work place. The wind energy industry in New Zealand is subject to all of these definitions as well as complying with relevant regulations and Codes of Practice. Regulations are made under section 211 of the Act. They may be made in relation to:

- Duties and obligations
- Notifiable events
- Plant, substances, or structures
- Hazards and risks
- Records and notices
- Industry
- Authorisations
- Identity cards
- Review and appeal of decisions
- Exemptions
- Offences and penalties
- Infringement offences
- Fees and charges
- Forms
- General

The need for compliance with codes of practice is slightly less straightforward, as it is not always explicitly required under the Act. However, failure to comply with a code of practice resulting in an injury may be used to prove that a person with duties under the Act did not take all steps 'so far as is reasonably practicable' to prevent harm in the work place.

Intentionally putting others at risk may be prosecuted under sections 47, 48 and 49 of the Act. It is not necessary for an incident to have occurred for prosecution to take place.

PCBU's including those who manage or control a workplace, those who manage or control fittings and fixtures at a workplace, designers, manufacturers, importers, suppliers and installers, officers, workers, health and safety representatives, and other persons all have their own specific duties under the Act. The key to compliance with the laws is to be aware of these responsibilities and the relevant hazards within the industry and ensuring that all steps so far as is reasonably practicable are taken to prevent harm to oneself or to others. The expectation is that what *can be done* to control hazards *has been done* to the best of the individual's ability. The understanding and adherence to the relevant regulations and codes of practice helps to ensure that this is done.

The section below is intended to provide a guide as to which Act or Regulation may apply. It is not exhaustive and the indication of applicability should not be taken as a legal interpretation. Acts, Regulations and Codes of Practice are listed but subsequent amendments are not. Many of the following are easily accessible at the Worksafe New Zealand's website.

4.2. Relevant Acts, Regulations and Codes of Practice

The key relevant acts relating to health and safety are:

- Health and Safety at Work Act, 2015.
- Accident Compensation Act 2001.
- Fire Safety Act 1975.
- Building Act 2004.

The relevant regulations include:

- Health and Safety at Work Regulations, 2015.
- Health and Safety in Employment Regulations 1995 (HSER:95).
- Health and Safety in Employment (Pressure Equipment, Cranes, and passenger Ropeways) Regulations 1999.
- Electricity (Safety) Regulations 2010Fire Safety and Evacuation of Buildings Regulations 2006.

Relevant Worksafe NZ guidelines include:

- A Guide to Respiratory Protection, 1999.
- First Aid for Workplaces - A Good Practice Guide, 2011.
- Good Practice Guideline for Scaffolding in New Zealand.
- Approved code of practice for the Management of substances hazardous to Health, Best Practice Guidelines for the Safe Use of Machinery, 2014 Electrical Interlocking for Safety in Industrial Processes - Guidance Notes for, 1994.
- Guidelines for the provision of Facilities and General Safety in the Construction Industry.
- Managing Health and Safety – A guide for farmers, 2014.
- Best practice guidelines for working at height in New Zealand (April 2012).

Relevant codes of practice include:

- Code of Practice for Manual Handling 2001.
- Approved Code of Practice for Cranes, 2007.

Relevant standards include:

- AS/NZS 1657:1992 Fixed platforms, walkways, stairways and ladders. Design, construction and installation.
- AS 2865: 2009 Safe Working in a Confined Space.

4.3. The Health and Safety at Work Act 2015 Individual and Entity Duties under the Act

The Act names: Person conducting business or undertaking (PCBU), officers, workers, health and safety representatives and other persons specifically as having duties with regards to the safety in work places. The following are applications of the relevant Acts, Regulations, and Codes not mentioned specifically in other sections of these guidelines for the wind energy industry.

4.3.1. Person conducting business or undertaking (PCBU)

A PCBU is a 'person conducting a business or an undertaking'. It is a broad concept used throughout the Health and Safety at Work Act 2015 (HSWA) to describe all types of modern working arrangements, which are commonly referred to as 'businesses'.

In most cases the legal registered entity (the business) is the “PCBU”, the exception is sole traders where the individual is the PCBU.

Under the Health and Safety at Work Act, 2015, PCBU’s have a number of duties.

A PCBU must ensure, so far as is reasonably practicable, the health and safety of workers and that other people are not put at risk by its work. This is called the ‘primary duty of care’.

The primary duty of care is a broad overarching duty. It includes but is not limited to, so far as is reasonably practicable:

- providing and maintaining a work environment that is without risks to health and safety.
- providing and maintaining safe plant and structures.
- providing and maintaining safe systems of work.
- ensuring the safe use, handling and storage of plant, structures and substances.
- providing adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities.
- providing any information, training, instruction, or supervision that is necessary to protect all people from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking.
- Monitoring the health of workers and the conditions at the workplace for the purpose of preventing injury or illness of workers arising from the conduct of the business or undertaking.

4.3.2. Duty of PCBU who installs, constructs, or commissions plant or structures

The PCBU must, so far as is reasonably practicable, ensure that the way in which the plant or structure is installed, constructed, or commissioned ensures that the plant or structure is without risks to the health and safety of persons:

a) who install or construct the plant or structure at a workplace; or

b) who use the plant or structure at a workplace for a purpose for which it was installed, constructed, or commissioned; or

c) who carry out any reasonably foreseeable activity at a workplace in relation to the proper use, decommissioning, or dismantling of the plant or

d) demolition, or disposal of the structure; or

e) who are at or in the vicinity of a workplace and whose health or safety may be affected by a use or an activity referred to in any of paragraphs.

4.3.3. Officers duties

An officer is a person who holds a very senior leadership position and has the ability to significantly influence the management of a PCBU. Organisations can have more than one officer.

Officers are:

- company directors (even if they do not have 'director' in the title).
- any partner in a partnership (other than a limited partnership).
- any general partner in a limited partnership.
- any person who holds a position comparable to a director in a body corporate or an unincorporated body.
- any person who exercises significant influence over the management of the business or undertaking (e.g. the Chief Executive).

Every officer has a duty – it is not a joint duty. Officers have a duty because they make policy and investment decisions that can affect workers' health and safety. People in senior leadership positions have an important role in leading health and safety culture throughout a PCBU.

In many organisations it is not practical for officers to be directly involved in the day-to-day management of health and safety. However they are still required to take reasonable steps to:

- Acquire, and keep up to date, knowledge of work health and safety matters.
- Gain an understanding of the nature of the operations of the business or undertaking of the PCBU and generally of the hazards and risks associated with those operations.
- Ensure that the PCBU has available for use, and uses, appropriate resources and processes to eliminate or minimise risks to health and safety from work carried out as part of the conduct of the business or undertaking.
- Ensure that the PCBU has, and implements, processes for complying with any duty or obligation of the PCBU under HSWA.
- Ensure that the PCBU has appropriate processes for receiving and considering information regarding incidents, hazards, and risks and for responding in a timely way to that information.
- Verify the provision and use of the resources and processes referred to above.

Officers of large PCBUs cannot rely on the fact that their organisation has a health and safety management system in place. They should understand how it works, and take steps to make sure it is working. In smaller PCBUs, officers are more likely to have a hands-on role in health and safety. They might talk directly with workers, supervise health and safety practices and investigate incidents.

Officers that only have a passive role or interest in work health and safety are not taking 'reasonable steps'.

Officers cannot delegate their duties, however, they can rely on information and advice provided by others such as Consultants or practitioners.

Worker participation

A PCBU must, so far as is reasonably practicable, engage with workers who carry out work for the business or undertaking; and who are, or are likely to be, directly affected by a matter relating to work health or safety.

All workers must:

- take reasonable care of their own health and safety.
- take reasonable care that what they do or don't do doesn't adversely affect the health and safety of others.
- cooperate with any reasonable policies or procedures the business or undertaking has in place on how to work in a safe and healthy way.
- comply with any reasonable instruction given by the business or undertaking so that they can comply with HSWA and the regulations.

Under section 59 of the Health and Safety at Work Act, 2015, all businesses and undertakings must involve their workers in workplace health and safety. Businesses have two related duties:

- to engage with workers who carry out work for them on health and safety matters that may directly affect them.
- to have practices that give their workers reasonable opportunities to participate effectively in improving health and safety in the business or undertaking on an ongoing basis (these are known as worker participation practices).

These duties only extend to workers who carry out work for the business or undertaking.

Worker engagement and worker participation practices can be direct or through representation.

Under section 62 of the Act, a PCBU must have practices that provide reasonable opportunities for workers who carry out work for the business or undertaking to participate effectively in improving work health and safety in the business or undertaking on an ongoing basis. A PCBU may, on the PCBU's own initiative, or at the request of a worker, initiate the election of 1 or more health and safety representatives to represent workers who carry out work for that business or undertaking

A PCBU is not required to initiate the election of 1 or more health and safety representatives, if the work of the business or undertaking-

a) is carried out by fewer than 20 workers; and

b) is not within the scope of any high-risk sector or industry prescribed by regulations.

Training and competency of employers

Under section36 of the Act, a PCBU must ensure, so far as is reasonably practicable, the provision of any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking.

Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 requires that a PCBU must ensure that an emergency plan is prepared and maintained for the workplace.

A PCBU must ensure, so far as is reasonably practicable, that every worker who carries out work of any kind, uses plant of any kind, or deals with a substance of any kind that is capable of causing a risk in a workplace has adequate knowledge and experience of similar places, and work, plant, or substances of that kind or that the worker is adequately supervised by a person who has that knowledge and experience; and is adequately trained in the safe use of all plant, objects, substances, or equipment that the worker is or may be required to use or handle; and all personal protective equipment that the worker is or may be required to wear or use.

Notifiable event

A PCBU must, as soon as possible after becoming aware that a notifiable event arising out of the conduct of the business or undertaking has occurred, ensure that the regulator is notified of the event.

A PCBU must keep a record of each notifiable event for at least 5 years from the date on which notice of the event is given to the regulator

4.4. Accident Compensation Act

The Accident Compensation Act 2001 requires employers to ensure that:

- Their ACC coverage is current.
- The coverage relates to all their employees.
- Their coverage reflects the current work practices, including maintenance and construction work.
- Maintain a register of work place injuries.
- Allow for employees to visit a doctor of their choice.
- Keep regular contact with employees who suffer a work place injury.
- Injury claims are complete and lodged with ACC as soon as possible after the injury occurs.
- Work actively with ACC to develop effective return to work programs for employees following injuries requiring time off work.
- Pay an injured employee their lost earning compensation for the first week off work, and ensure ACC has the employee's details for further payments if necessary.

5. Next steps

This document is the first in a series of health and safety guidelines. Future guidelines will cover specific issues such as:

- Site development and planning.
- Design, specification, manufacture and assembly.
- Construction, commissioning and demolition.
- Operation and maintenance, and
- Cross cutting issues, such as cranage.

These guidelines will recommend standards that should be used in different situations. They will draw on best international practice and mesh these with the legislative environment in New Zealand.

Feedback and suggestions on this and the H&S programme are welcome.