

Annual Health and Safety Report

2010





RenewableUK is the trade and professional body for the UK wind and marine renewables industries. Formed in 1978, and with over 600 corporate members, RenewableUK is the leading renewable energy trade association in the UK.

Wind has been the world's fastest growing renewable energy source for the last seven years, and this trend is expected to continue with falling costs of wind energy and the urgent international need to tackle CO₂ emissions to prevent climate change.

In 2004, RenewableUK expanded its mission to champion wave and tidal energy and use the Association's experience to guide these technologies along the same path to commercialisation.

Our primary purpose is to promote the use of wind, wave and tidal power in and around the UK. We act as a central point for information for our membership and as a lobbying group to promote wind energy and marine renewables to government, industry, the media and the public. We research and find solutions to current issues and generally act as the forum for the UK wind, wave and tidal industry, and have an annual turnover in excess of nearly four million pounds.

Foreword

We are delighted to publish our first Annual Report arising out of the RenewableUK Health and Safety Lessons Learned scheme¹.

This is an important milestone in our development as a trade association, and also in what is now an ever-expanding industry. Evidence shows that industries and organisations that learn and share Health and Safety experiences invariably perform the best. In light of this, RenewableUK is committed to ensuring that it will promote best practice wherever possible as a result of the lessons we learn as an industry, be they positive or negative. We hope this report is a positive step in demonstrating this in practice by starting to publicly share our experiences.

This report provides a high level summary of reported activity in the offshore wind and large scale onshore wind sectors. RenewableUK members participating in the associations incident reporting scheme are provided with more detailed feedback on a quarterly basis and are able to benefit from one to one interactions to explore learning points in more detail on specific incidents. In its current format the scheme enables incidents to be reported, collated and subsequently shared with the participating organisations. Whilst the reports include commentary on lessons learned out of the collated incident data received, the most important lessons learned are achieved at a local level by the participating scheme members.

Strategic Priorities

RenewableUK recognises its responsibility to take a lead on Health and Safety matters as they relate to the risks particular to our sector.

“Our strategy makes three key commitments directly relevant to learning and sharing Health and Safety experiences.”

We stand behind our commitment to ensure that Health and Safety remains the top priority in the wind, wave and tidal industry, and that best practice is applied to ensure the good reputation of renewable generation is maintained.

Although Health and Safety is central to all policy areas within RenewableUK, the practical lead is driven by its Health and Safety Strategy Group and sub-groups, including the lessons learned group. Our strategy makes three key commitments directly relevant to learning and sharing Health and Safety experiences. These are the commitments to:

- ‘Promote the successful role of Health and Safety in delivering a safe and sustainable future for the UK industry’;
- Develop and implement measures that will enable the industry to share and benefit from individual Health and Safety experiences’; and
- ‘Review Health and Safety experiences from other allied sectors in order to introduce appropriate practices to the industry’.

Lessons Learned Database

The Lessons Learned Database was launched in 2006. The scheme, which continues to expand, has played a key role in helping participating RenewableUK members share, learn and understand about real Health and Safety events occurring in our sector.

“The quarterly reports provide a rich source of Health and Safety information to enable companies to take practical steps to implement measures to improve Health and Safety performance.”

It enables participating companies to report and subsequently learn from accidents, incidents and near events on a non-attributable basis, operated under a confidentiality agreement. Quarterly reports are issued, which provide comprehensive analysis of recent experiences and trends specific to the large wind sector. The scheme covers all phases of UK-based projects, from development activity and construction through to operations.

This collective view enables common activities and hazards to be identified, and underlying causes, be they human, organisational or technical, to be examined. Attention is paid not just to what happened but also to impact potential, in order that the true significance is understood. The quarterly reports provide a rich source of Health and Safety information to enable companies to take practical steps to implement measures to improve Health and Safety performance.

In addition key lessons are also shared and communicated with our working sub-groups covering training, public safety, operational safety rules, occupational health and communications. This report summarises the key lessons learned and trends reported in 2009.

2009 Industry Profile and Participation

At the end of 2009 installed capacity for large wind turbines stood at just over 4,000MW, generated by approximately 2,728 turbines.

“ This coverage provides a high degree of confidence that we are hearing about a representative cross section of experiences in our industry. ”

In addition around 1,764MW of capacity was undergoing construction, involving around 657 turbines. ²

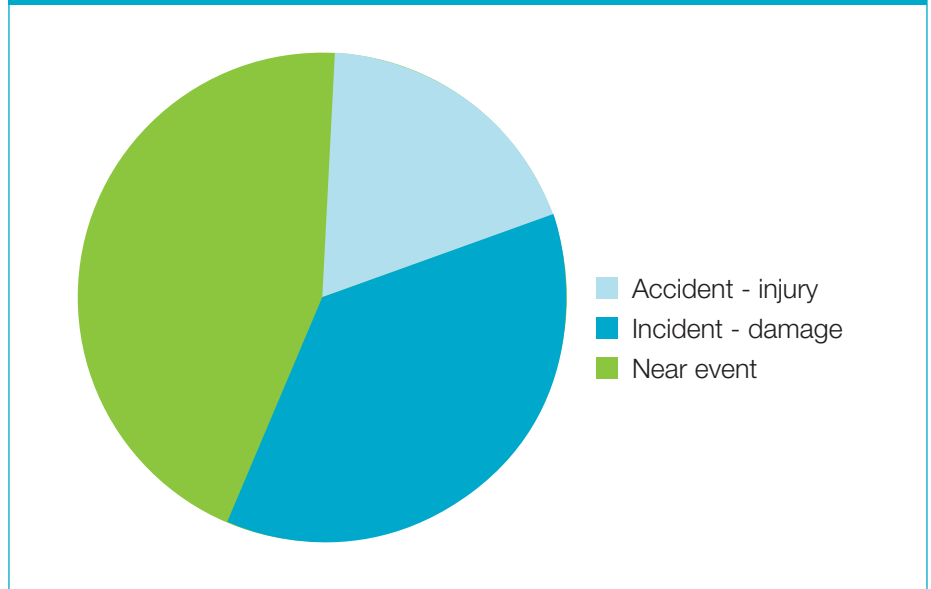
In 2009 participation in the scheme expanded to 36 companies. This represents in excess of 80% of the generating capacity currently installed or undergoing construction. This coverage provides a high degree of confidence that we are hearing about a representative cross section of experiences in our industry.

During 2009 a separate database was launched for small wind, and work has progressed to initiate a similar scheme in 2010 for the wave and tidal sector. Reports for these sectors are expected to be published in 2011.

Reported Incidents in 2009

- In 2009 there were two recorded deaths in the sector³;
- no major injuries were recorded by the scheme in 2009 (as defined by RIDDOR)⁴;
- six over-three-day injuries were recorded by the scheme in 2009 (as defined by RIDDOR);
- and one dangerous occurrence was recorded by the scheme in 2009 (as defined by RIDDOR).
- 18% of notices submitted resulted in an accident leading to injury. These capture all types of accident, including fatalities, notifiable injuries, lost time accidents, first aid cases and those where no treatment was required.
- 37% of notices submitted resulted in damage to plant equipment or facilities. These capture all events that may have resulted in significant delay or cost, on-site repairs beyond shift, repairs made during shift and those where operations could continue.
- 45% of notices submitted were recorded as near events in which the condition of the scenario had the potential to cause injury or damage. These capture all types of accidents that had the potential to cause injury or damage, and also other events such as environmental incidents, those in which evacuation, escape or rescue was compromised, or when there was a loss of communications that could compromise safety.

Figure 1 - 2009 Breakdown of Submitted Notices

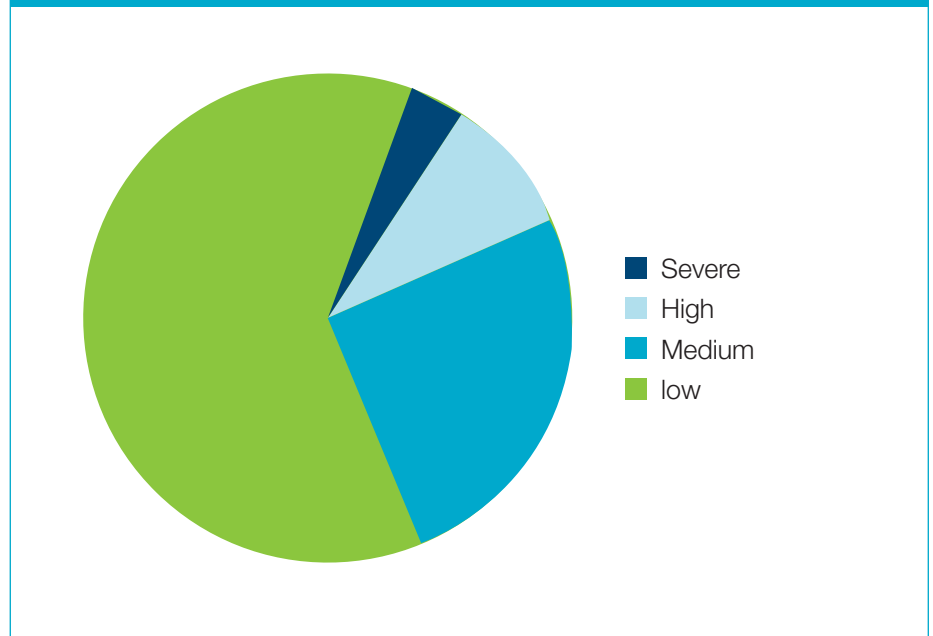


³ These are currently subject to formal investigations. A safety alert was issued by RenewableUK as a result of the Causeymire fatality in September 2009.
⁴ Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995.

Notices submitted are further broken down according to the potential severity of incidents reported in terms of injury or damage. The breakdown for 2009 is presented in Figure 2.

- 8% of notices submitted were rated as severe. These would include incidents with the potential to cause death or multiple injuries, or in which the damage could have been irreparable.
- 15% of notices submitted were rated as high. These would include incidents with the potential to cause single or multiple injuries, or in which the damage could have led to significant downtime.
- 30% of notices submitted were rated as medium. These would include incidents with the potential to cause single or multiple lost time, first aid incidents, or those in which the damage could have led to minor downtime.
- 47% of notices submitted were rated as low. These would include incidents with the potential to cause a single lost time incident or multiple first aid incidents, or in which the damage was considered to be tolerable.

Figure 2 - 2009 Breakdown of Potential Severity



Major Themes Recorded for 2009

The key Health and Safety themes that arose from the incident reports submitted during 2009 were:

Construction

A significant proportion of the incidents recorded occurred during the construction phase of wind farm developments. The risks in the wind sector are broadly comparable with other major construction projects. However, the lessons show that particular vigilance is required to take account of the often-difficult locations of projects (onshore and offshore) and the complex nature of projects being delivered under the Construction (Design and Management) Regulations 2007.

Work-related driving

Work-related driving issues are a common theme in the notices received in 2009. The incident data demonstrates a strong seasonal variation, with the winter months bringing repeated road and site transport incidents due to a combination of factors including poor visibility as a result of shorter daylight hours, cold/icy/snowy conditions making access to and from sites difficult and the inherent risks of sites in exposed and remote locations.

Large goods vehicles

The use of large goods vehicles, heavy plant and transporters is common on wind farms, especially during the construction phase. In addition to the risks the vehicles pose to site personnel and contractors, they also create or exacerbate other risks. These include damage to site roadways and vehicles sinking into surrounding soft ground. This highlights the importance of providing adequate site induction to those arriving on site. The reports also reinforce the need to review the design of site infrastructure, including roadways, reversing areas, use of hardstanding and segregation of pedestrians from vehicles.

Trespass/vandalism/theft

These incidents were recorded across UK wind farms. Legislation covering 'rights to roam'⁵ mean that it is not always possible or appropriate to restrict access to

5 Note: different legislation clarifying the rights to roam applies across the UK.

operational wind farms. However, the incidents reported highlight the importance of ensuring the provision of suitable security arrangements based on risk assessment and the known history of incidents for any given site.

Work at height

Notices submitted highlight the need for continued vigilance when managing and controlling work-at-height risks. Reports highlight the critical importance that all equipment provided (including PPE and lift devices) is fit-for-purpose and used appropriately. This reinforces the importance of robust procedures to ensure equipment is suitable and approved to recognised standards. It also makes clear that all operators should receive comprehensive training that is appropriate to the equipment provided and the site/turbine they are working on.

Offshore

The experience of incidents offshore highlights the logistical complexity of remedial actions in that environment. This highlights the importance of good planning and the fact that preventative measures, such as good design, are the most effective controls.

SCADA

SCADA (Supervisory Control and Data Acquisition) has been shown to provide an efficient and effective technique to enable remote monitoring of safety-critical plant and components. This has led not only to safety benefits but also to improvements in operational performance.

Public safety

Instances of ice accumulation and lightning, as well as other component damage to turbines and blades, are being followed up in conjunction with the public safety sub-group. There are insufficient notice returns to draw any conclusions to date.

Communication

Incidents have underlined the importance of strict adherence to communication, and control protocols being reinforced with operational maintenance teams. This extends to the need to enforce authorisations for personnel entering and leaving worksites.

Wind turbine safety rules

These are proving to be a sound basis for enabling the operation of safe working practices. However, reported cases of non-compliance with the rules highlight the importance that these are rectified with further training or toolbox talks.

Other hazards

A significant proportion of the incidents reported are not unique to the wind sector. For example, injuries are still coming from manual handling during operational maintenance and inspection, and as a consequence of slip or trip hazards.

2010 and Beyond

As a responsible and committed industry our primary goal is to endeavour to prevent and minimise the chance of incidents occurring in the first place.

To achieve this even greater vigilance will need to be paid embedding safety as early as possible into a project. Good design, visible leadership and effective communication on Health and Safety matters across the life cycle of projects will be key to achieving this.

Key areas in which we expect to make progress in 2010 include:

- extending the take-up of new participants to the small systems database;
- launching a database to cover the marine and tidal sectors;
- consulting on the development of an annual industry-wide safety survey to gather cross-industry Health and Safety performance indicators;
- increasing participation in the large wind scheme;
- improving the level and quality of notice returns; and
- increase the relevance and quality of lessons learned in the quarterly annual reports.

To find out more about the scheme if you are not already a participant, please go to the RenewableUK website at: <http://www.renewable-uk.com/safety/lessons.html>.

Chris Streatfeild
RenewableUK
Director of Health
and Safety
June 2010

Chris Black
Scottish Power Renewables
Chair – Lessons
Learned Database
June 2010

We also welcome your comments and feedback about this report and how it can be improved in any way.

Acknowledgements

RenewableUK would like to acknowledge the time, effort and support given by all participating members of the scheme, and the contribution of the RenewableUK lessons learned sub-group.

Disclaimer

This report has been issued in accordance with the confidentiality agreement signed by all participating companies. The contents of this report are intended for information and general guidance only, do not constitute advice, are not exhaustive and do not indicate any specific course of action. Detailed professional advice should be obtained before taking or refraining from action in relation to any of the contents of this report or the relevance or applicability of the information herein.

RenewableUK

Greencoat House, Francis Street
London SW1P 1DH, United Kingdom

Tel: +44 (0)20 7901 3000

Fax: +44 (0)20 7901 3001

Web: www.renewable-uk.com

Email: info@renewable-uk.com