



Winter Working: Onshore Wind Construction

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Details

The future of onshore projects post-2018 remains uncertain. However, the next few years will see significant construction activity which could lead to:

- Increased pressure on duty holders to complete projects before deadlines;
- Intensified winter working increasing worker exposure to the more challenging environmental and operational hazards (e.g. weather, light & access);
- Reduced availability of competent contactors - especially for commissioning activities.

This safety bulletin provides basic information to members in relation to winter working and the sensible safety precautions all sites need to consider in relation to winter conditions with particular consideration for construction.

What are the key challenges?

Winter challenges for onshore wind farm construction include:

- Direct hazards of extreme weather conditions – wind, snow, ice etc.
- Consequential risks from cracked/leaking oil/diesel tanks or damaged assets e.g. overhead power lines
- Reduced visibility and darkness with reduced daylight hours
- Flooding & run off, icy surfaces, snow accumulation
- Ground stability and conditions for excavations
- Transport, site access and occupational driving to/from & on site
- Site access for emergency services
- Shortened weather windows for critical activities (e.g. lifting)
- Comfort and thermal risks (hypothermia etc.) of workers.
- Suitability of and access to adequate welfare facilities
- Planning, managing change and effective communication between parties on site
- Reduced or loss of effective communications on site (fixed and/or mobile)

- Rapid change of conditions (e.g. from clear to snow fall or from wet to icy etc.)

These are often exacerbated in view of the often remote nature of many sites.

What should we be thinking about?

Effective risk management & CDM principles¹ and practice are central and so effective planning & preparation are essential to manage the risks. Winter conditions are foreseeable – all contracting parties need to take account of the additional challenges winter working may present and take necessary steps to ensure work can be undertaken safely. Some areas to think about include:

Planning

- Has enough contingency been allowed in the H&S plan to allow for delays, for example when extreme weather forces construction to stop, when deliveries are postponed, or personnel with the necessary competences cannot attend site?
- If it appears likely that the project will need longer working days, more plant or more people on site to meet a deadline, have the risks been addressed so the work can be carried out safely?

Weather

- Has the prevention of slips, trips and falls been considered – especially around main access areas and for the first to arrive on site?
- Have you reviewed your weather forecasting arrangements and have in place adequate measures to communicate any significant information?
- Has the risk of ice fall been considered when the main towers and blades have been erected and installed?
- What about vehicle access and safety once there is a covering of snow/ice? How can risks be minimised with appropriate demarcation, suitable vehicles, route clearance etc?

- Have you assessed the effects of extreme low temperatures on materials (e.g. concrete curing, cables, pipes etc.)

Operational

- If the job might run into the hours of darkness – is there access to portable temporary lighting?
- Are effective processes in place to isolate and secure assets? Who else might need to work on your asset?
- If the ground is frozen how easy is it going to be to break ground? What if the risk assessments indicate the need to hand dig?
- When any part of the site is ready to energise – do all those on site know what is involved, which rules will now apply and who is taking control?
- Have driving hazards been properly considered including driver training and vehicle selection suitable to the known or potential site conditions?

Communications

- Are there effective systems in place to make sure someone knows where everyone is, what they are doing and what time you will get finished today?
- Has radio and other communications equipment been checked before going to work and confirmed effective to transmit and receive?

Emergencies

- If it was difficult to get on site today – how easy would it be for the emergency services to get on site? Are the site arrangements adequate?
- Does everyone know what to do, whom to contact etc. in the event of an emergency or changing conditions on site?
- In the event of anyone being isolated/stranded on site – are there effective means to notify people including possibly family members who may need to be informed?

Health & Welfare

- In the event of extreme weather will the welfare facilities still function (e.g. freezing pipes) and will be people have access to basics (toilets/hot water)?
- When more cold weather clothing is used - will PPE still be effective? (e.g. safety harnesses not compromised or Hi-vis covered up)
- Are “winter survival” packs needed and, if so, have you thought what to include? (e.g. sleeping bags, gloves/hats, food, flares etc.)
- Have you taken account of potential impacts of worker fatigue which may be exacerbated due to the weather and work conditions?
- Has training and first aid provisions adequately considered hypothermia risks?
- Has the provision of hot drinks/hot food been considered for those working outdoors?

Safety Management

- Are communication and consultation processes effective to ensure roles, responsibilities and tasks have taken into account winter working conditions?
- If the conditions change, the people or equipment expected are not available or other unexpected tasks are running in parallel, is it clear how to reassess the task risks and devise a safe method statement before proceeding?
- Is there a shared conviction that despite pressures of the job, short-cuts must not be taken or safety compromised?
- If work has to be delayed, is there a clear mechanism for communicating change and co-ordinating knock-on effects for other parties?

In addition to these project/site issues common sense and vigilance should always be applied when thinking about winter working. These include thinking carefully about if it is sensible and safe for workers to travel to work if extreme weather is expected and paying due regards to the winter driving advice given by the main motoring organisations (e.g. the AA, RAC).

Reference & Links

RenewableUK

- Onshore Wind Health & Safety Guidelines (2015)

HSE

- Construction Safety
- Slips & Trips – Icy Conditions and Winter Weather
- Clocks go back – HSE issues advice for safe working in winter

OSHA (US)

- Winter Weather

1. Construction (Design & Management) Regulations 2015 – Approved Code of Practice L144

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