

IWEA Best Practice Guidelines for Windfarm Electrical Operation & Electrical Switching

References: IS EN 50110 – 1 & 2

I.S.EN 61936-1: 2013

In order to carry out electrical switching operations safely the Windfarm electrical installation must be under the control of the HV System Manager (person responsible for an electrical installation as defined in ISEN 50110 -1 para 3.2.1) and all electrical operations must be carried out under a comprehensive set of HV System Rules.

The HV System Manager shall have competence (training and experience) relevant to the operation of the windfarm.

The HV System Manager shall be appointed to the role by the owner of the windfarm or the person or organisation who has responsibility for the safe operation of the windfarm.

Similarly, the HV System Rules shall be relevant to the operation of the system as a whole and be in accordance with IS EN 50110 – 1 & 2.

The HV System Manager shall appoint suitably competent persons to carry out the various roles described in ISEN 50110-1 clause 3.2. specifically:

1. A nominated person who is competent and authorised to safely operate electrical equipment and to issue appropriate safety documentation such as a Proof of Isolation and Permit to Work (PTW) in accordance with ISEN 50110-1 clause 3.2.2.
2. A nominated person who is competent and authorised to supervise a working party and to receive appropriate safety documents such as a Proof of Isolation and Permit to Work in accordance with ISEN 50110-1 clause 3.2.3.

The HV System manager shall be responsible for creating the HV System Rules for the HV system and for ensuring they are applied for all work on or in the vicinity of the HV system.

The HV System Manager shall also be responsible for assessing and verifying the competence of appointed persons.

Each appointed person shall carry out the duties and responsibilities delegated to them by the HV System Manager in accordance with the HV System Rules.

The HV System Rules shall specify procedures, instructions and documentation required to ensure compliance with IS EN 50110 – 1 paragraphs 4, 5, 6 & 7.

Before energisation, the installation or piece of electrical equipment shall be certified as being designed, installed and commissioned in accordance with I.S.EN 61936-1.

The functions of the HV System Manager (or as delegated to his nominated persons) during an outage of an operational Windfarm shall include (but not be limited to);

(i) Communication and liaison with the network operator in regard to permissions and notifications for the export of generated power.

(ii) Co-ordination of the electrical operations with respect to the overall activities on the windfarm during the outage

(iii) Provision of a set of rules which include requirements, procedures and forms for;

(a) disconnection from the utility network,

(b) testing for voltage, isolation and lock out/tag out

(c) earthing and physical protection

(d) issuing Permits to Work

(e) re-commissioning and certification

(f) cancellation of Permits to Work

(g) reconnection to the network

(h) authorisations for individuals

(iv) Approval of the required authorisations, RAMS, permits and certifications

provided by each party in respect of their individual activities

While IS EN 50110 – 1 & 2 dictates that it is the HV System Manager's responsibility to assess competence of the nominated person, it is the Windfarm owner's responsibility to assess the competence of the HV System Manager and appoint a suitably competent person to this position.

In the absence of statutory regulation in regard to competence in general, the Windfarm owner is advised to seek the opinion and advice of a Chartered Electrical Engineer in regard to the appointment of the HV System Manager as a Chartered Engineer has a professional

obligation to determine if their experience is appropriate and furthermore can take professional responsibility for the appointment of the HV System Manager.

While the HV System Manager's may determine competence of the nominated person, appropriate competence for the nominated person would be qualification from ESB as PICW (A or B) or from a UK Utility as Senior Authorised Person (SAP).

In the absence of such qualification, the HV System manager is advised to seek the opinion and advice of a Chartered Electrical Engineer who may rely on their professional judgement to determine appropriate competence.

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