Wind Turbine Safety Rules - Support Procedure P7

Company ‘A’ Wind Turbine Safety Rules Procedure
Control and Management of Crosss Boundary Safety Precautions
between the Wind Turbine Safety Rules and other Safety Rules

4th Edition
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FOREWORD

Cross-boundary isolations, if improperly enacted, can lead to danger of harm to individuals. This supporting procedure establishes the fundamental requirements for achieving a safe cross-boundary isolation. The basic principles are:

(i) Requesting – Issuing a clear request for a cross-boundary isolation to the person responsible for applying the cross-boundary isolation.
(ii) Confirming – Receiving confirmation that the request has been implemented.
(iii) Control – Achieving dual control of isolations implemented to prevent reinstatement until the work is confirmed as complete and cross-boundary isolation is no longer required.
(iv) Removal – Issuing a clear request for removal of a cross-boundary isolation to the person responsible for its removal.

Support Procedure P7

The Control and Management of Cross-Boundary Safety Precautions Between the Wind Turbine Safety Rules and Other Safety Rules.

CHANGE LOG

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<td>June 2021</td>
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</tr>
<tr>
<td>5</td>
<td>CIC addition</td>
<td>May 2024</td>
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1 PURPOSE

This Wind Turbine Safety Rules Support Procedure details the process to be followed when working across Safety Rules Boundaries using the Wind Turbine Safety Rules (WTSR). The implementation of this support procedure does not relieve anyone of their statutory duties under country-specific health and safety legislation.
2 RESPONSIBILITIES

The responsibilities for implementation of this support procedure shall be defined in a Company ‘A’ local Management Instruction.
3 SCOPE

This support procedure shall be followed whenever it is necessary to implement more than one set of Safety Rules simultaneously, at any given Wind Farm Location, in order to achieve Safety from the System. Credible scenarios covered within the scope of this procedure include:

(i) Where isolation is required under the Boundary Safety Rules (BSR) as part of the required safety precautions for work or testing under the Company ‘A’ WTSR.

(ii) Where isolation is required under the Company ‘A’ WTSR as part of the required safety precautions for work or testing under the Boundary Safety Rules.

NOTE: Whilst this WTSR Support Procedure P7 has been written to reflect requirements applicable under the Company ‘A’ WTSR, it is important to recognise that an equivalent procedure will be required for the correct application of the Approved HV Safety Rules agreed by Company ‘A’ for use at its Wind Farm Locations, or any other set of Safety Rules applicable to Safety from the System.
4 DEFINITIONS

For the purposes of this procedure:

4.1 Boundary Safety Rules (BSR), when used in this support procedure, refers to the Safety Rules that are being used on the other side of Company ‘A’ WTSR boundary at the Location.

4.2 Appointed Person (AP), when used in this support procedure, refers to the person who is responsible for the application of the BSR at the Location and/or able to receive a Confirmation of Isolation Certificate (CIC) from a WTSR Authorised Technician.

4.3 Confirmation of Isolation Certificate (CIC), refers to a certificate issued with a key safe key to the AP which confirms the Wind Turbine Generator (WTG) isolations have been applied.

4.4 Near Miss, when used in this support procedure, means an event that was an unintentional incident that could have caused damage, injury or death but was narrowly avoided and/or has the potential to undermine the effectiveness of the safe system of work.

4.5 Management Instruction, when used in this support procedure, means a procedure for use at an individual Wind Farm Location or series of Wind Farm Locations, that documents additional elements of the Health and Safety Management Systems of Company ‘A’ that are to be applied to meet specified requirements of the WTSR.
5 CROSS BOUNDARY SAFETY

5.1 DEFINED BOUNDARY POINTS

5.1.1 Where different sets of Safety Rules apply at any given Wind Farm Location, it will be necessary to clearly and accurately define the boundary points.

5.1.2 Safety Rule boundaries shall be defined to ensure that only one set of Safety Rules applies to the Plant or Apparatus within the boundary.

5.1.3 The boundary points for each Location shall be recorded by use of a Safety Rules Inclusion Certificate (SRIC).

5.1.4 The BSR AP shall understand the SRIC contents and understand the boundary of the Company ‘A’ WTSR in relation to the BSR.

5.1.5 WTSR A1.4 states that: ‘When work or testing involves HV Apparatus, Approved HV Safety Rules shall be used’. This means that at least two sets of Safety Rules will be applied at the Location:

(i) Company ‘A’ Wind Turbine Safety Rules (WTSR)
(ii) Boundary Safety Rules (BSR)

5.2 PREPARATION OF AN APPROVED WRITTEN PROCEDURE FOR CROSS-BOUNDARY ISOLATIONS

5.2.1 The Authorising Engineer and the AP for the BSR, shall discuss the work to be done and then agree on the following:

− Isolations on the BSR System that shall be applied.
− Isolations on the Company ‘A’ WTSR System that shall be applied.
− Safety Documents that shall be applicable to the work or testing.
− How security of isolations will be achieved and maintained, including the security of safety keys.
− Any specifics to the Location which may affect the work or testing.

5.2.2 The Authorising Engineer shall ensure that the approved written procedure (AWP) is recognisable as a cross-boundary AWP.

5.2.3 The AWP shall state when the application of BSR isolations shall be carried out.

5.2.4 The sequence of isolations, to achieve safety, shall be agreed between the Authorising Engineer and the AP. The sequence of isolations shall be arranged to reduce the risks to persons to as low as is reasonably practicable.

5.2.5 The AWP shall have provision for the AP to sign a declaration stating that the points of isolation have been applied using the BSR.
5.2.6 The AWP shall clearly state when the removal of BSR isolations will be carried out.

5.2.7 The AWP shall have provision for the AP to sign a declaration stating that the points of isolation have been removed using the BSR.

5.2.8 When AWPs are written to provide a cross-boundary isolation for work on the BSR side of the boundary, then no other work shall be quoted on the AWP. For example, ‘Work or Testing to be Done:’ will simply state ‘Application of Cross-Boundary Isolation for Work Under BSR’.

- Examples of AWPs are provided in Appendix B, C, D and E.
- Examples of workflows are provided in Appendix F and G.
6 ISOLATION ON THE BSR SIDE FOR WORK UNDER THE WTSR

6.1 In this scenario the WTSR shall be the primary set of safety rules. All work shall be carried out under an AWP.

6.2 Following Transfer of Control, the Authorised Technician shall contact the AP before application of safety precautions detailed in the AWP.

There are two methods whereby BSR cross-boundary isolations can be applied to enable work to take place under the WTSR:

- When BSR isolations are applied but no BSR Safety Document is to be issued.
- When BSR isolations are applied and a BSR Safety Document is issued with a key safe key ensuring dual control of the BSR isolations.

6.3 At the relevant point in the AWP, the Authorised Technician shall confirm to the AP that all isolations have been applied under the WTSR.

NOTE: During the initial discussions between the Authorising Engineer and the AP, it may have been agreed that the high voltage isolations/precautions are enacted first to allow any isolations carried out on the WTSR side to be undertaken on a de-energised circuit. If this is the case, the AWP will identify this in the sequence of isolation application.

If there is any doubt about the isolations or their adequacy, work or testing shall not proceed, and an Authorising Engineer shall be contacted.

6.4 The Authorised Technician shall then request that the AP is to apply isolations on the BSR System.

6.5 When no BSR Safety Document is to be Issued (Method 1)

6.5.1 The application of the BSR isolations shall, where reasonably practicable, be witnessed by the Authorised Technician. Two locks shall be fitted to each point of isolation, using a multi-hasp where necessary. The AP and Authorised Technician shall each retain a key to achieve dual locking/control.

6.5.2 The sequence of applying isolations, as stated in the AWP, shall be followed precisely. Any variation in this sequence may result in Danger.

6.5.3 Following application of isolations on the BSR System, the AP shall sign the declaration on the AWP to confirm the BSR isolations have been applied.

6.6 When a BSR Safety Document is Issued, Along with a Key Safe Key Ensuring Dual Control of the BSR Isolations (Method 2)

6.6.1 In this scenario the Authorised Technician is provided with a BSR Safety Document and where reasonably practicable, a key safe key shall be issued. This Safety Document is used as an isolation holding document. It confirms that all isolations/precautions applied to the BSR System are in place. The key safe key ensures dual control of the isolation keys to prevent unplanned re-energisation.
6.6.2 Where a BSR Safety Document is signed by the AP, then a further signature by the AP on the AWP is not required.

6.6.3 The AWP shall have provision for the Authorised Technician to record the number of the BSR Safety Document.

6.6.4 The Authorised Technician shall personally retain the BSR Safety Document for the duration of work or testing under the AWP.

6.6.5 Where the AP, under the BSR, refuses to issue a key safe key with a BSR Safety Document, then, where reasonably practicable, two safety locks shall be applied at each BSR isolation point, using a multi-hasp locking device, witnessed by the Authorised Technician. The Authorised Technician and the AP shall retain their own safety keys from their own safety locks for the duration of work or testing.

**When Work is Completed Under WTSR – BSR Isolations to be Removed**

6.7 On completion of the work, the Authorised Technician shall complete and sign the relevant ‘clearance and cancellation’ Signature Checkpoint sections of the AWP, before requesting the AP to arrange removal of the BSR isolations.

6.8 Both must agree that the safety precautions on the BSR System can be removed.

6.9 **When no BSR Safety Document was Issued (Method 1)**

6.9.1 The AP removes the isolations, witnessed by the Authorised Technician. The AP then signs for the removal of the BSR isolations on the AWP.

6.10 **When a BSR Safety Document was Issued, along with a Key Safe Key Ensuring Dual Control of the BSR Isolations (Method 2)**

6.10.1 The Authorised Technician clears the BSR Safety Document, confirming that the isolations/precautions are no longer required; returning the BSR Safety Document and Key Safe Key to the AP. The AP cancels the BSR Safety Document, and removes the BSR isolations. The Authorised Technician does not need to witness the removal of the isolations.

6.11 The AP must confirm to the Authorised Technician that the BSR System has been restored to its normal operational condition.

6.12 The Authorised Technician shall remove any remaining isolations on the WTSR side of the boundary and sign each Signature Checkpoint in the normal manner. The wind turbine shall be returned to an operational state, in accordance with instructions given in the AWP.
7 ISOLATION ON THE WTSR SIDE FOR WORK UNDER THE BSR

7.1 In this scenario the BSR shall be the primary set of safety rules. All work shall be carried out using a BSR Safety Document.

7.2 The AP will contact the Authorising Engineer who will discuss and agree the isolations. The Authorising Engineer will approve an AWP to allow the WTSR isolations to be put in place and maintained.

7.3 When the AP requires isolation on the WTSR System, they shall contact the Authorised Technician and request isolations are applied. The Authorised Technician shall follow the AWP for ‘Cross-Boundary Isolation’.

There are two methods whereby WTSR isolations can be applied to enable work to take place under the BSR:

(i) When WTSR isolations are applied but no WTSR Confirmation of Isolation Certificate (CIC) is to be issued.
(ii) When WTSR isolations are applied and a CIC is issued with a key safe key ensuring dual control of the WTSR isolations.

7.4 When no WTSR CIC is to be Issued (Method 1)

7.4.1 It may be the case that the Location has Authorised Technicians who are also appointed as an AP under the HV safety rules for the Location. In this case it is permissible to forego the requirement to issue a CIC, as long as the AP is fulfilling the cross-boundary process for both sets of rules.

7.4.2 The application of the WTSR isolations shall be witnessed by the AP. Two locks shall be fitted to each point of isolation, using a multi-hasp where necessary. The AP and Authorised Technician shall each retain a Key to achieve dual locking/control.

7.4.3 The sequence of applying isolations, as stated in the AWP, shall be followed precisely. Any variation in this sequence may result in Danger.

7.4.4 Following application of isolations on the WTSR System, the AP shall sign the AWP to confirm they’ve witnessed WTSR isolations.

7.4.5 The AWP and associated keys shall be surrendered into safe custody or personally held by the Authorised Technician.

7.5 When a CIC is Issued with a Key Safe Key Ensuring Dual Control of the WTSR Isolations (Method 2)

7.5.1 The sequence of applying isolations, as stated on the AWP, shall be followed precisely. Any variation in this sequence may result in Danger.

7.5.2 A key safe shall be used by the Authorised Technician to retain the isolations in safe custody.
7.5.3 When the WTG isolations have been applied, and the AWP Signature Checkpoint has been signed, the Authorised Technician shall complete a Confirmation of Isolation Certificate (CIC). (Appendix A)

The following sections of the CIC shall be completed by the Authorised Technician:
- Wind Turbine Generator number/identifier
- ‘Confirmation of Applied Precautions’ Signature Checkpoint

7.5.4 The Authorised Technician shall issue the CIC to the AP, confirming that the isolations have been applied. A key safe key shall be issued with the CIC to the AP to achieve dual locking/control.

7.5.5 AP signs onto AWP to confirm receipt of CIC and key safe key.

7.5.6 The Authorised Technician shall inform the AP that the AWP is now a holding document for these isolations and a record of issue for the CIC.

7.5.7 The AP should retain the issued CIC and key safe key in their safe custody.

7.5.8 The AWP and associated key safe key shall be surrendered into safe custody or personally held by the Authorised Technician.

**When Work is Completed Under BSR – WTSR Isolations to be Removed**

7.6 When the AP requires the WTSR isolation to be removed, they shall contact the Authorised Technician.

7.7 The Authorised Technician shall remove the AWP from safe custody.

**Note:** The Authorised Technician may need to re-issue the AWP to themselves if the AWP has been surrendered.

7.8 When no WTSR CIC was Issued (Method 1)

7.8.1 The AP confirms with the Authorised Technician that the work is complete and it’s safe to remove the cross-boundary isolation by signing a confirmation on the AWP. The Authorised Technician shall complete the AWP including the ‘clearance and cancellation’ sections.

7.8.2 The Authorised Technician then removes the isolations, witnessed by the AP.

7.8.3 The Authorised Technician shall return the wind turbine Plant/LV Apparatus to an operational state in accordance with the AWP.

7.9 When a CIC was Issued with a Key Safe Key Ensuring Dual Control of the WTSR Isolations (Method 2)

7.9.1 The AP shall confirm that the boundary isolation is no longer required by signing the clearance on the CIC. The AP shall then return the CIC and associated key safe key to the Authorised Technician. The Authorised Technician shall then cancel the CIC.
7.9.2 The Authorised Technician shall complete the AWP including the ‘clearance and cancellation’ sections.

7.9.3 The Authorised Technician shall return the wind turbine Plant/LV Apparatus to an operational state in accordance with the AWP.
8  SAFETY PRECAUTIONS COMPROMISED

8.1 If there is reason to believe that any safety precaution may be compromised, the AP or Authorised Technician must inform the other party without delay, stating the reason for doubt.

8.2 All work or testing shall be stopped until the integrity of the safety precautions can be confirmed. If doubts still exist then an ‘Objection on Safety Reasons’ shall be raised as to why work or testing cannot continue.

8.3 In the case of lost documents or keys, the correct ‘Special Instruction’ (GP3) shall be followed. A Near Miss report shall be raised.
9 SWITCHING OPERATIONS

9.1 If an Authorised Technician is to witness, in person, the application and/or removal of BSR System isolations, then they shall follow all instructions for personal safety given by the AP when switching.

9.2 The Authorised Technician shall not put themselves in a position of Danger as a result of associated BSR switching operations.
10 INCIDENTS ACROSS CONTROL BOUNDARIES

10.1 All parties who control Systems at Wind Farm Locations shall always provide each other with any information regarding incidents at that Location.

10.2 All cross-boundary incidents at the Location shall be reported to the Operational Controller and the AP for the BSR without delay.

10.3 All parties shall report information on any accidents, incidents or near misses at the earliest opportunity.
11 APPARATUS IN DISTRESS

11.1 If Apparatus that forms part of the boundary isolation is showing signs of distress, then all working parties shall be informed and withdrawn from the area immediately. They shall be prevented from re-entering until the affected item of Apparatus is confirmed safe by suitable means.
## APPENDIX A
### CONFIRMATION OF ISOLATION CERTIFICATE

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<th>COMPANY ‘A’ WIND TURBINE SAFETY RULES</th>
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<td>Cross-Boundary Isolations</td>
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1. **Confirmation of Isolation (CIC) Details:**

- **CIC Prepared by:**
  - Name:

- **CIC Approved by Authorising Engineer:**
  - Name:
  - Signature:

- **Associated with AWP No**

- **AWP Revision No**

2. **Location / WTG Details:**

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<tr>
<td>2.1</td>
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<td>2.2</td>
<td>WTG Number:</td>
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3. **Confirmation of Applied Precautions:**

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</tr>
<tr>
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<td>2.</td>
</tr>
<tr>
<td>3.2</td>
<td>Additional Precautions Applied:</td>
</tr>
<tr>
<td>3.3</td>
<td>Confirmation of Applied Precautions:</td>
</tr>
<tr>
<td></td>
<td>I certify that the precautions listed in steps 3.1 to 3.2 above have been completed which establishes a Cross Boundary Isolation from the WTG System</td>
</tr>
<tr>
<td></td>
<td>Signature Checkpoint.......................... Time.......... Date...........</td>
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(WTSR – Authorised Technician)
### Confirmation of Isolations Certificate

#### Cross-Boundary Isolations

#### Issue of CIC:

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<th>Detail</th>
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<td>4.1</td>
<td>I as the Authorised Technician have confirmed with the Boundary Safety Rules Appointed Person that the Isolations listed under this CIC have been applied to achieve Safety from the WTG System. This CIC and a key safe key shall be retained in safe custody by the Appointed Person for the duration of work. Key Safe Key Identification: ………………………………… Print Name: …………………………. Time………………. Date: ……………. (WTSR – Authorised Technician) <strong>Issued to:</strong> Print Name: …………………………. Time………………. Date: ……………. (BSR – Appointed Person)</td>
</tr>
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#### Clearance and Cancellation of CIC:

<table>
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<th>Detail</th>
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<tbody>
<tr>
<td>5.1</td>
<td>Clearance: I confirm that I no longer require the isolations/precautions applied to achieve Safety from the WTG System, and it is safe for the isolations to be removed. I have returned the key safe for dual control of the WTG Isolations Signature: …………………………. Time………………. Date: ……………. (BSR – Appointed Person) Print Name: …………………………. (BSR – Appointed Person)</td>
</tr>
<tr>
<td>5.2</td>
<td>Cancellation: This CIC has now been cancelled. I have received the key safe key that was issued to the Boundary Person for dual control of the WTG isolations Signature: …………………………. Time………………. Date: ……………. (WTSR – Authorised Technician) Print Name: …………………………. (WTSR – Authorised Technician)</td>
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APPENDIX B
EXAMPLE OF AWP – ISOLATION ON BSR SIDE FOR WORK UNDER THE WTSR (NO BSR SAFETY DOCUMENT ISSUED)

PRIOR TO THE WORK

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<th>3.3</th>
<th>Points of Isolation (POI) Application:</th>
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<td>The Authorised Technician shall witness the AP for the BSR System apply all BSR System isolations. These isolations shall be secured by safety lock(s) and caution notices. All safety keys shall be securely retained for the duration of work or testing</td>
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<th>PRECAUTIONS (APPLICATION):</th>
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<td>I certify that I have applied all BSR safety precautions relevant to the statement in Section 3.3</td>
</tr>
<tr>
<td></td>
<td>Signed ………………………… being the Appointed Person under the Boundary Safety Rules</td>
</tr>
<tr>
<td></td>
<td>Time: ……………………….. Date: ………………………..</td>
</tr>
<tr>
<td></td>
<td>I certify that the BSR safety precautions stated in Section 3.3 have been applied to provide Safety from the System. Their application has been witnessed</td>
</tr>
<tr>
<td></td>
<td>AT Signature Checkpoint: ……………………….. Time: ……… Date: ………..</td>
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For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.

ON COMPLETION OF THE WORK

<table>
<thead>
<tr>
<th>3.7</th>
<th>Clearance:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I certify that the work or testing under this AWP is now complete and all persons in my Working Party have been withdrawn and warned that it is no longer safe to continue working or testing on the Plant/Apparatus</td>
</tr>
<tr>
<td></td>
<td>All gear, tools and loose equipment have been removed</td>
</tr>
<tr>
<td></td>
<td>All guards, covers and access doors have been replaced</td>
</tr>
<tr>
<td></td>
<td>The Wind Turbine Generator is in a safe condition to be returned to service except for the following exceptions (limitations or restrictions):*</td>
</tr>
<tr>
<td></td>
<td>…………………………………………………………………………………………………………………………………………………………………</td>
</tr>
<tr>
<td></td>
<td>…………………………………………………………………………………………………………………………………………………………………</td>
</tr>
<tr>
<td></td>
<td>Signature Checkpoint: ……………………….. Time: ……… Date: ………..</td>
</tr>
</tbody>
</table>

* Record Nil if Not Applicable
### 4.0 Return to Service:

<table>
<thead>
<tr>
<th>Step</th>
<th>Operation</th>
</tr>
</thead>
</table>
| 4.1  | **Cancellation:**  
I certify that all items issued under this AWP have been accounted for and that it is safe to remove all remaining Points of Isolation. The Operational Controller will be informed of the completion of work/testing under this AWP and of any exceptions on returning the Plant/Apparatus to its normal operational condition.  
Signature Checkpoint: …………………………. Time: ……..……. Date: …………… |
| 4.2  | **Remaining Points of Isolation (POI) Removal:**  
**POINT(s) OF ISOLATION (REMOVAL)**  
The Authorised Technician shall personally witness the AP for the BSR remove all isolations on the BSR System. If it is required to return the BSR System to an operational condition then this shall be carried out in accordance with BSR procedures |
| 4.3  | **PRECAUTIONS (REMOVAL):**  
I certify that I have removed the safety precautions listed in Section 4.2  
Signed …………………………. being the Appointed Person under the BSR  
Time: ………………………….. Date: ……………………… |

*For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.*
APPENDIX C
EXAMPLE OF AWP – ISOLATION ON BSR SIDE FOR WORK UNDER THE WTSR (BSR SAFETY DOCUMENT ISSUED)

PRIOR TO THE WORK

3.3 Points of Isolation (POI) Application:
The Authorised Technician shall be provided with a BSR Safety Document which will clearly identify which BSR isolations have been applied on the BSR System by the Appointed Person

3.4 PRECAUTIONS (APPLICATION):
The BSR Safety Document number …………………………. is now in force.
Time: …………………………. Date: ………………………….
I certify that the safety precautions stated in Section 3.3 have been applied and a BSR Safety Document has been issued to me clearly stating the isolations that have been applied under the BSR
AT Signature Checkpoint: …………………………. Time: …….…. Date: …….....

For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.

ON COMPLETION OF THE WORK

3.7 Clearance:
I certify that the work or testing under this AWP is now complete and all persons in my Working Party have been withdrawn and warned that it is no longer safe to continue working or testing on the Plant/Apparatus
All gear, tools and loose equipment have been removed
All guards, covers and access doors have been replaced
The Wind Turbine Generator is in a safe condition to be returned to service except for the following exceptions (limitations or restrictions):*
………………………….………………………….…………………………...........
………………………….………………………….………………...………...…....
Signature Checkpoint: …………………………. Time: …….. Date: ….........
* Record Nil if Not Applicable
### 4.0 Return to Service:

<table>
<thead>
<tr>
<th>Step</th>
<th>Operation</th>
</tr>
</thead>
</table>
| 4.1  | Cancellation:  
I certify that all items issued under this AWP have been accounted for and that it is safe to remove all remaining Points of Isolation. The Operational Controller will be informed of the completion of work/testing under this AWP and of any exceptions on returning the Plant/Apparatus to its normal operational condition.  
Signature Checkpoint: ..........................  Time: ........ Date: ............ |
| 4.2  | Remaining Points of Isolation (POI) Removal:  
POINT(S) OF ISOLATION (REMOVAL)  
The Authorised Technician shall ensure that it is safe to clear the BSR Safety Document and return it with the safety key to the Person for the BSR. |
| 4.3  | PRECAUTIONS (REMOVAL):  
I certify that the BSR Safety Document has been cleared and cancelled and all isolations under the Safety Document have been removed.  
The BSR Safety Document number ................. is no longer in force.  
AT Signature Checkpoint: ..........................  Time: ........ Date: ............ |

*For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.*
**APPENDIX D**

**EXAMPLE OF AWP – ISOLATION ON WTSR SIDE FOR WORK UNDER THE BSR (NO WTSR CIC ISSUED)**

**PRIOR TO THE WORK**

<table>
<thead>
<tr>
<th>Step</th>
<th>Operation</th>
<th>Time:</th>
<th>Sign:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Establish Local Control of the Wind Turbine: – The Local/Remote switch has been locked in local and a Caution Notice has been applied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Establish General Safety: Complete General Safety Risk Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>The Appointed Person shall witness the Authorised Technician who shall carry out steps 3.4 to 3.5 below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>Points of Isolation (POI) Application:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. POI Application: WTSR System</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. POI Application: WTSR System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>Additional precautions required:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Completion of Precautions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I certify that the precautions listed in steps 3.1 to 3.5 above have been completed which establish both General Safety and Safety from the System in order to carry out the work/testing specified in Step 1.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature Checkpoint:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.7 This AWP shall remain in Safe Custody and no work will be undertaken on the Plant/Apparatus detailed in 1.3 until confirmation has been received from the Appointed Person that the precautions detailed in steps 3.1 to 3.5 are no longer required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.*
### ON COMPLETION OF THE WORK

<table>
<thead>
<tr>
<th>3.1</th>
<th>I have received confirmation from …………………… (AP for BSR) that the precautions detailed in steps 3.1 to 3.5 are no longer required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signature Checkpoint: …………………… Time: …………. Date: ……….</td>
</tr>
<tr>
<td>(Appointed Person)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature Checkpoint: …………………… Time: …………. Date: ……….</td>
</tr>
<tr>
<td>(Authorised Technician)</td>
<td></td>
</tr>
<tr>
<td><strong>3.2</strong></td>
<td><strong>End of Work / Testing</strong></td>
</tr>
</tbody>
</table>

#### Clearance:
I certify that the work or testing under this AWP is now complete and all persons in my Working Party have been withdrawn and warned that it is no longer safe to continue working or testing on the Plant/Apparatus.

- All gear, tools and loose equipment have been removed.
- All guards, covers and access doors have been replaced.
- The Wind Turbine Generator is in a safe condition to be returned to service except for the following exceptions (limitations or restrictions):*

  1. …………………………….………………………….………………………….....
  2. …………………………….………………………….………………………….....

| Signature Checkpoint: …………………… Time: …………. Date: ………. |

* Record Nil if Not Applicable.

For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.
### APPENDIX E
EXAMPLE OF AWP – ISOLATION ON WTSR SIDE FOR WORK UNDER THE BSR (WTSR CIC ISSUED)

**PRIOR TO THE WORK**

<table>
<thead>
<tr>
<th>Step</th>
<th>Operation</th>
<th>Time:</th>
<th>Sign:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Establish Local Control of the Wind Turbine: – The Local/Remote switch has been locked in local and a Caution Notice has been applied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Establish General Safety: Complete General Safety Risk Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Points of Isolation (POI) Application:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. POI Application: WTSR System</td>
<td>Time:</td>
<td>Sign:</td>
</tr>
<tr>
<td></td>
<td>2. POI Application: WTSR System</td>
<td>Time:</td>
<td>Sign:</td>
</tr>
<tr>
<td>3.4</td>
<td>Additional precautions required:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>Completion of Precautions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I certify that the precautions listed in steps 3.1 to 3.4 above have been completed which establish both General Safety and Safety from the System in order to carry out the work/testing specified in Step 1.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature Checkpoint: ................................ Time: ........ Date: ........</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>I the Authorised Technician confirm that a CIC and a key safe key has been issued to the BSR Appointed Person</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Key Safe Key Identification: ...............................................</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature: .......................................................... Time: ........ Date: ........</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Authorised Technician)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Issued to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signature: .......................................................... Time: ........ Date: ........</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Appointed Person)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Print Name: .......................................................... Company: ................</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Appointed Person)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>This AWP and associated safety keys shall remain in Safe Custody and no work will be undertaken on the Plant/Apparatus detailed in 1.3 until written confirmation has been received from the Appointed Person, via the CIC, that the precautions detailed in steps 3.1 to 3.4 are no longer required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate Authorising Engineer.*
### ON COMPLETION OF THE WORK

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **3.1** | Section 5 of the CIC has been completed by the AP (Clearance Section), confirming that the applied isolations are no longer required. The CIC has been returned to myself, along with the key safe key. The CIC is now cancelled.  
Signature Checkpoint: …………………………. Time: ……….... Date: ……….  
(Authorised Technician) |
| **3.2** | End of Work / Testing |
| **3.3** | **Clearance:**  
I certify that the work or testing under this AWP is now complete and all persons in my Working Party have been withdrawn and warned that it is no longer safe to continue working or testing on the Plant/Apparatus.  
All gear, tools and loose equipment have been removed.  
All guards, covers and access doors have been replaced.  
The Wind Turbine Generator is in a safe condition to be returned to service except for the following exceptions (limitations or restrictions):*  
………………………….………………………….…………………………...........  
………………………….………………...………...…....  
Signature Checkpoint: …………………………. Time: ……….... Date: ……….  
* Record Nil if Not Applicable |

*For illustration purposes only, the exact wording on the Approved Written Procedure shall be determined by the appropriate **Authorising Engineer**.*
APPENDIX F
FLOW CHART FOR THE APPLICATION OF CROSS BOUNDARY SAFETY PRECAUTIONS

Isolation on the BSR side of the boundary for work under the WTSR

AE approves AWP to establish and maintain agreed BSR isolations for work under WTSR

AT obtains AWP and contacts OC for Transfer of Control

AT contacts AP to apply points of isolation and confirms whether a BSR Safety Document will be issued?

No

AP applies isolation on BSR System and prepares a BSR Safety Document

Yes

AP provides BSR Safety Document & key safe key to AT.

(If no key safe key is issued by AP then the AT/ AP use a hasp and dual lock, witnessed by AT)

AT records BSR Safety Document number on AWP. The AT retains the BSR Safety Document and keys for dual control in their Safe Custody

Authorised Technician carries out work in accordance with the AWP & WTSR

AP signs AWP against each BSR isolation applied. AT signs each Signature Checkpoint on AWP in the normal manner.

Implementation of Cross Boundary Safety Precautions

AP signs onto AWP to confirm receipt of CIC and key safe key. AP retains CIC and key for duration of work.

AWP can now be surrendered or held in Safe Custody by AT.

DSR Appointed Person carries out work in accordance with the BSR

Isolation on the WTSR side of the boundary for work under the BSR

AE approves AWP to establish and maintain agreed WTSR isolations for work under BSR

AP contacts AT and requests an isolation on the WTSR System

AT obtains AWP and carries out Transfer of Control

ATWTSR Confirmation of Isolation Certificate (CIC) to be issued?

Yes

No
APPENDIX G
FLOW CHART FOR THE REMOVAL OF CROSS BOUNDARY SAFETY PRECAUTIONS

When work is completed under WTSR - BSR isolations to be removed

- AT clears and cancels the AWP
- AT contacts AP to request and agree removal of BSR isolations
- BSR Safety Document issued?
  - Yes
    - (Method 2) AT clears and returns BSR Safety Document and key safe key to AP. AP cancels BSR Safety Document and removes BSR isolations, confirming with AT that BSR System has been restored to its normal operation. (If no key safe key was issued by the AP, then AT witnesses removal of isolations by AP)
    - (Method 1) AP carries out removal of BSR isolations witnessed by AT
    - AT signs Signature Checkpoint on AWP for removal of remaining WTSR isolations
  - No
    - AP signs AWP for removal of BSR isolations. AP confirms that BSR System has been restored to its normal operational condition

When work is completed under BSR - WTSR isolations to be removed

- AP contacts AT and requests removal of WTSR isolation
- WTSR CIC issued?
  - Yes
    - AT removes AWP from safe custody and contacts OC to re-issue
    - AT returns wind turbine to an operational state in accordance with AWP and contacts the OC to enact Transfer of Control
  - No
    - AP signs AWP to confirm that isolations can be removed. AT clears and cancels the AWP
    - AT removes WTSR isolations, witnessed by the AP
This publication has been produced as a result of work carried out within the Technical Team of the Energy Institute (EI), funded by the EI’s Technical Partners and other stakeholders. The EI’s Technical Work Programme provides industry with cost effective, value adding knowledge on key current and future issues affecting those operating in the energy industry.