

WTG Nacelle Transformer Remote Isolation Procedure

Purpose:

- *To provide a method for safe remote isolation to enable access to WTG Nacelle Transformer Room and associated equipment*

Responsibilities:

As set out in

- Hydro Tasmania HSE Handbook and Operational Procedures – most recent editions
- Woolnorth Wind Operational Documents and Procedures
- OEM Operational Documents and Procedures
- Relevant standards and legislation as applicable to this document

Note:

Commencement and completion times of this procedure are to be logged in the Operational Log Sheet. To be used in conjunction with;

- *Approved **Permit to Work***
- *Approved **Isolation SOPO***
- *Approved **Restoration SOPO***
- *Before any operations are to be commenced all applicable Schedule of Planned Operations/Switching Sheets shall be checked and approved by the appropriate person(s).*
- *AIO in nacelle is deemed the AIO for the permit and must be consulted should any changes in permit conditions occur.*
- *Locks for this procedure are issued to registered competent people assessed to operate site specific RMU devices, they are to be Yellow in colour, keyed alike and have “Danger – Do Not Operate” Tags attached when applied. Locks are not to be used from existing group isolation boards.*
- *For remote isolation at the RMU by a site qualified Operator (electrician trained in RMU operation at the designated Wind Farm), testing and work earth application shall be carried out in the Nacelle by a suitably qualified person.*
- *This procedure is only to be used for tasks that can be completed in the current scheduled work day. If the isolation is required for more than this period then the PTW process must be followed using the **GROUP** lockout procedure*
- *A clear path of communication is to be established from HV Operator at RMU to PIC/AIO in Nacelle (via phone or radio).*
- *Prior to restoration of the cable to the WTG the HV Operator must reconfirm that it is safe to energise*
- *If the isolation is performed at the preceding turbine (remote), the keys for the isolation locks must to be re-located to the controller of the isolated turbine.*

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WH 25062013	001	Lance Lovell June 13	Stephen Ross 04/07/13

Item	Description of Operational Action
1.	AIO confirms that the PTW has been authorised by asset owner or delegate and requires the remote isolation to proceed
2.	HV Operator performing isolation at WTG RMU conducts checks on RMU indication lamps and SF6 level and confirms with AIO in nacelle that he is ready to proceed with Isolation SOPO
3.	AIO in nacelle confirms that he is also ready to proceed with the isolation SOPO
4.	HV Operator confirms with AIO that the Isolation SOPO is complete
5.	AIO asks for confirmation from the HV Operator that the applicable Circuit Breaker is OPEN, Isolator is OPEN, locked and tagged and the Earth Switch is CLOSED, locked and tagged
6.	HV Operator places "Danger Do Not Operate" tag on Yellow Lock Key and places in the WTG Controller Panel then confirms to AIO that the key has been tagged and stored
7.	HV Operator then notifies the AIO that it is now safe to allow access to the transformer room of WTG
8.	AIO then issues the PTW to the assigned PIC (if the roles are held by different personnel)
9.	PIC removes lock(s) that secure the Transformer Room in the Nacelle
10.	PIC then ensures a suitably qualified person in the nacelle is able to proceed with testing to confirm the transformer is de-energised and applies local earths.
	The Isolation and PTW issuing process has now been completed and work can commence. Proceed with step 11 upon completion of relevant permit scope of work.
11.	AIO ensures that all IP's signed off, work earths have been removed and Nacelle Transformer Room has been locked secure – all personnel have been removed from the area.
12.	AIO confirms with the HV Operator that the work has been completed and the permit is in the 'Suspended' or "Cancelled" state.
13.	HV Operator then confirms with the AIO that it is OK to commence the Restoration SOPO
14.	HV Operator then removes the "Danger Do Not Operate" tag from the Yellow Locks and commences the Restoration SOPO
15.	HV Operator then confirms to the AIO that the restoration has been completed and indicators on the RMU show that the cable has been energised to the Nacelle Transformer Room
16.	AIO then confirms with the HV Operator that the works has been successful and there is now no need for the operator to perform further work for the PTW
	The Restoration procedure has now been completed and all work inside the Transformer Room has been successful
17.	AIO may also communicate that the repair has not been successful and there will be a need for another Remote Isolation of the HV Transformer. The AIO will then reactivate the Remote Isolation Procedure.

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