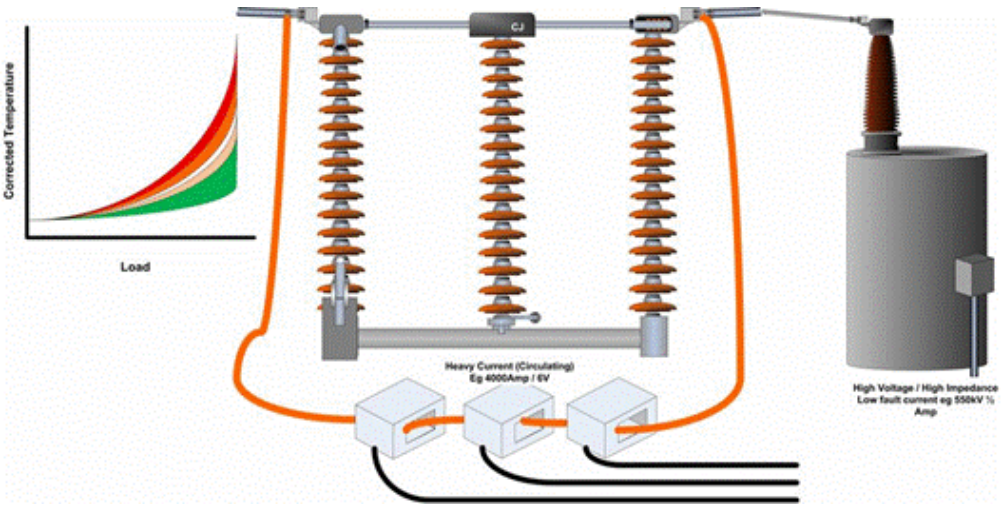
Supplementary Answer Form

Project: OSEAIT

Tick if this answer has been provided verbally: ☐

Project code	NGET_OSEAIT	Question Number	7
Question date	03 September 2015	Answer date	07 September 2015
Submission section question relates to	Appendix I: Benefits Table		
Topic	General		
Question	What will the power source and load be for this "off-grid" substation?		
Notes on question			
Answer	*(1) Power source to the site* At present, site power will be provided from the 11kV or 33kV distribution network to 400kV step up transformers. The decision on which voltage we will use will depend on the outcome from discussions with the local DNO (SP Networks). The 11/33kV supply will be distributed around the site via the 'site services' network. We are considering the possibility of powering areas of the facility through the tertiary windings of an existing 400 kV transformer, however this is still at the exploration stage. *(2) Load for the site* The load will vary according to the testing being carried out. Energising the substation and connected equipment at 400kV will require high voltage low power test supplies. The main power requirement will relate to the need to thermally cycle equipment. This will involve passing high levels of current through the assets under test generating high levels of losses. Such a system is shown in the figure below:		

	 The 550kV transformer(s) will be energised from the site services supply (described in (1)). The lower voltage transformers 132/33kV, 132/11kV will be loaded using load banks, or by circulating current using the tap changers.
Attachments	