

Electricity Network Innovation Competition Full Submission
Supplementary Answer Form

Project: REVISE

Tick if this answer has been provided verbally: ☐

Project code	WPD/EN/NIC/05	Question Number	11
Question date	21 August 2018	Answer date	23 August 2018
Submission section question relates to	N/A		
Topic			
Question	For the DPS, what comparisons have been made with establishing unit protection as a permanent solution (especially once ACS is available)?		
Notes on question	None		
Answer	<p>The DPS Method will be designed to integrate many different types of protection together. In some instances it may be appropriate to implement unit protection where a section of network has a discrete protection zone with the ability to easily provide communication channels between all points in the zone. With the addition of ACSs on the network it is likely that we will create more zones where unit protection could be implemented.</p> <p>However, during our analysis of the networks in the trial areas, we believe that it would not be possible to provide unit protection as the permanent solution in all instances due to the following reasons:</p> <ul style="list-style-type: none">• ACSs will be deployed at strategic points on the network however, it is possible that network t-connections will still exist within the trial area. If unit protection was installed as a permanent solution the protection zones would have to incorporate the existing t-connections which would result in complex and expensive retrofitting of equipment and communication channels at each protection zone boundary. Achieving this could also be impractical due to the number of zone boundaries that would be required;• Network reconfigurations (splitting the network or making a parallel connection) may result in the unit protection zone changing and therefore preventing a permanent solution; and		

	<ul style="list-style-type: none"> • Providing suitable channels of communication between all ends of the zone could be expensive considering the distances involved on an overhead network. <p>In the detailed design phase of the DPS Method (Deliverable D4) we intend to investigate the appropriate types of protection that will need to be deployed across the trial area network. When deploying unit protection is possible from a technical perspective, we will assess the costs of providing this against other protection schemes and determine the optimal solution(s).</p>
Attachments	None