

NSI 2 Appendix A.10 - Number of Portable Primary Earths Per Phase

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Aberthaw			1	2	1								
Abham	1	2			1								
Acton Lane						1			2				
Aldwarke			2	2				2					
Alverdiscott	1	2			1								
Amersham	1	2			1								
Aust CSE	2	2											
Axminster	1	2			1								
Baglan Bay			1	2									
Barking	3	3	1	2	1			2					
Beddington	1	2	2	2	1								
Berkswell			1	2	1								
Bicker Fen	2	2			1								
Birkenhead			1	2	1								
Bishops Wood			1	2	2								
Blyth	1	2	2	2	2	1							
Bodelwyddan	2	2			1								
Bolney	2	2			2			(32): 2					
Botley Wood	2	2			1								
Bradford West	1	2	2	2	1								
Braintree	1	2			2								
Bramford	2	2			2								
Bramley	2	2			1								
Bredbury			2	2	1								
Brelston Green CSE	1	2											
Bridgwater			1	2	1								
Brimsgate			2	2	2								
Brinsworth	2	2	2	2									
Briton Ferry North CSE			1	2									
Briton Ferry South CSE			1	2									
Bulls Lodge	1	2											

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Burwell	2	2			2								
Bushbury			1	2	1								
Bustleholm	1	2	2	2	1								
Camblesforth						1							
Canterbury North	2	2			1								
Capenhurst	2	2	2	2	2			2					
Capenhurst D					1								2
Cardiff East			1	2	2								
Carrington	3	3	2	2	2								
Cellarhead	2	2			2								
Chafford Hundred East CSE	3	3											
Chafford Hundred West CSE	3	3											
Chessington			2	2	1								
Chesterfield			2	2	1								
Chetney Marsh CSE	3	3											1
Chickerell	1	2			1								
Chilling CSE	2	2											
Cilfynydd	2	2	1	2									
City Road	3	3			2								
Cleve Hill	2	2											
Connahs Quay	3	3			2								
Coryton South	2	2											
Cottam	2	2											
Coventry			1	2	1								
Cowbridge			1	2									
Cowley	2	2			2			1					
Creyke Beck	2	2	2	2	2								
Culham Jet	2	2											
Daines	3	3											
Damhead Creek	3	3											
Deeside	3	3											
Deeside Power CSE	3	3											
Didcot	2	2											

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Dinorwig	2	2											
Drakelow	2	2	2	2	1								
Drax	3	3			1	2							
Dunford Bridge CSE	2	2											
Dungeness	2	2	1	2									
Ealing			2	2		2							
East Claydon	2	2			2								
Eaton Socon	2	2			2								
Eggborough	2	2											
Elland			2	2	1								
Elstree	3	3	2	2	2								
Eltham					1								
Enderby	2	2			2								
Exeter	1	2			2								
Fawley	2	2			2								
Feckenham	2	2	1	2		2							
Ferrybridge A			1	2		1							
Ferrybridge B			1	2	2								
Ferrybridge c	2	2	1	2									
Ferrybridge EAST CSE	2	2											
Ferrybridge WEST CSE	2	2											
Ffestiniog			1	2									
Fiddlers Ferry			1	2	1								
Fleet	2	2			2								
Flintshire Bridge	2	2	(251): 1										
Fourstones			1	2				1		2			
Frodsham	2	2	1	2	1								
Garth CSE	2	2											
Grain	3	3			1								1
Grange						2							
Grangetown			1	2		1							
Gravesend CSE	3	3											
Grendon	2	2			2								
Greystones A & B			1	2		2							

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Grimsby West	1	2			1								
Gwent Y Mor					2								
Hackney	3	3	2	2	2	1							
Hams Hall	2	2	2	2	2								
Harker	2	2	1	2	1							3	
Hartmoor			1	2		1							
Hartlepool			2	2									
Hawthorn Pit	2	2	2	2		1							
Hedon			2	2									
Hemsworth CSE			2	2									
Hendon					2								
Heysham	2	2			1								
High Marnham	2	2	1	2				1					
Highbury	3	3											
Hinkley Point	2	2	1	2									
Horseshoe Point CSE	3	3											1
Humber Refinery	2	2											
Hurst			2	2	1								
Hutton	2	2			1								
Imperial Park	1	2						2					
Ince					1								
Indian Queens	1	2			2								
Iron Acton			1	2	2								
Ironbridge	2	2			1								
Iver	1	2	2	2	2	1							
Jordanthorpe			1	2				1					
Keadby	2	2			2								
Kearsley	2	2	2	2	2			2					
Kemsley	3	3			1								
Kensall Green	3	3											
Killingholme	2	2											
Kingsnorth	3	3			1								
Kirkby			2	2	1								
Kirkstall			1	2	1								

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Kitwell			1	2	1								
Knarborough			1	2	1								
Lackenby	2	2	1	2		1							
Lady Lane CSE	2	2											
Laleham			2	2	2								
Landulph	1	2			2								
Lantage	1	2											
Lea Marston					2								
Legacy	2	2			1								
Leighton Buzzard	3	3											
Leiston	2	2			2								
Lewingdon Wood CSE	3	3											
Lister Drive			2	2	1								
Little Barford	2	2											
Littlebrook	3	3	2	2	2								
Littlebrook/West Thurrock CSE Compounds	3	3											
Llanwern								1					
Lodge Road B						2							
Lovedean	2	2			1								
Loxton CSE	2	2											
Macclesfield	2	2	1	2				1					
Mannington	1	2			2								
Marchwood	2	2											
Margam			1	2		2							
Medway	3	3			1			1					
Melksham	2	2	1	2	2								
Middleton	2	2											
Mill Hill			2	2	2								
Minety	2	2			1								
Monk Fryston	2	2	2	2									
Moulsford Down CSE	3	3											
Nechells			2	2	1								
Nechells East					1								
Necton	2	2											

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Neepsend	1	2	2	2				1					
New Cross A & B			2	2	2	2		1				3	
Newby CSE	2	2											
Newhouse CSE	2	2											
Ninfield	2	2			1		2						
North Hinksey CSE	3	3											
North Hyde			1	2		2							
Northfleet East	2	2			1								
Norton	2	2	2	2	2								
Norton Lees			1	2				1					
Norwich Main	2	2			2								
Norwich					2								
Norwich Trowse					2								
Nunthorpe CSE	3	3											
Nursling	1	2			2			1				2	
Ocker Hill			1	2	1								
Offerton			2	2				1					
Oldbury	1	2	1	2	1								
Oldbury-on-Seven					1								
Osboldwick	1	2			1								
Padiham	2	2			1								
Patford Bridge	2	2											
Pelham	3	3			1							3	
Pembroke	2	2			1								
Penisarwaun CSE	2	2											
Penn	1	2	2	2	2								
Penrhos					1								
Pentir	2	2			1								
Pentre Mawr CSE	2	2											
Penwortham	2	2	2	2									
Penwortham East					2								
Penwortham West					2								
Perry Bar CSE			2	2									
Pitsmoor			2	2				1					

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Poppleton			1	2				1					
Port Ham					2			3					
Pudding Mill Lane	3	3											
Pyle			1	2	1								
Rainhill			2	2	1								
Rassau	1	2			1								
Ratcliffe-on- Soar	2	2	1	2	2								
Rayleigh Main	2	2			2								
Rayleigh Local					2								
Redbridge			2	2				1					
Rhigos	1	2											
Richborough	1	2			1								
Rochdale	1	2	2	2	2								
Rocksavage	2	2			1								
Rowdown	1	2	2	2									
Rugeley	1	2			1								
Rye House	2	2			1								
Ryhall	1	2											
Salt End North			2	2	1								
Salt End South			2	2									
Saltholme			2	2	1								
Sandford	2	2			1								
Seabank	2	2			2								
Sellindge	2	2	(270): 1	(270): 1	1								
Sheffield City			2	2				1					
Shrewsbury	1	2			1								
Shurton	2	2											
Singlewell	2	2											
Sizewell	2	2			2								
Skelton Grange			1	2	2								
South Hinksey CSE	2	2											
South Humber Bank	2	2											
South Manchester			2	2	1								
South Shields			2	2				1					
Spalding North	2	2											
Spennymoor	1	2	2	2	1								

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
St Asaph					2								
St Marylebone					1								
St Johns Wood	3	3	2	2	1						2		
Stalybridge	1	2	2	2	2								
Stannah	2	2			2								
Staythorpe	2	2			1								
Stella North					2								
Stella South					2								
Stella West	2	2	2	2	2								
Stocksbridge	1	2				2							
Stoke Bardolph	2	2			1								
Sundon	2	2			2								
Sutton Bridge	2	2											
Swansea North	1	2	1	2	2								
Taunton	1	2			1								
Templeborough			2	2				1					
Thornton	2	2											
Thorpe Marsh	2	2	2	2		2							
Thurrock Cable CSE	3	3											
Thurcroft			2	2		1							
Tilbury	3	3	2	2	1								
Tilbury CSE	3	3											
Tinsley Park			1	2				1					
Tod Point			1	2		1							
Tottenham			2	2	1								
Trawsfynydd	1	2	1	2	2								
Tremorfa			1	2				2					
Tynemouth			1	2	1								2
Upper Boat			1	2	1			2					
Urenco													2
Uskmouth			2	2	1			1					
Walford CSE	1	2											
Walham	1	2			2								
Walpole	2	2			2								

Substation	400kV		275kV		132kV	66kV	56kV	33kV	22kV	20.5kV	16kV	14kV	11kV
	Excluding Line end Equip	Line end Equip	Excluding Line end Equip	Line end Equip									
Waltham Cross	2	2	2	2									
Warley			2	2	1								
Washway Farm			1	2	1								
Watford South			2	2	1								
Wern CSE	2	2											
West Boldon			2	2		1							
West Burton	2	2			1								
West Ham	3	3			1								
West Melton			2	2	2								
West Thurrock	3	3	2	2				1					
West Weybridge	1	2	2	2	1								
Whitegate			2	2	1								
Whitson	2	2	2	2				1					
Willenhall			1	2	1								
Willesden			2	2	1	1							
Willington			1	2	2								
Willington East	2	2			2								
Wilton			2	2									
Wimbledon	3	3	2	2	2			2					
Wincobank			2	2				2					
Winterbourne Abbas North CSE (new)	2	2											
Winterbourne Abbas South CSE (new)	2	2											
Witton CSE			2	2									
Woodhead CSE	2	2											
Wood Lane CSE	2	2											
Wylfa	1	2			1								
Wymondley	2	2			2								
All 25kV Trackside s/s	1 PPE Per Phase												
All 25kV Primary s/s	1 PPE Per Phase												
All 13kV tertiary fed B/B	3 PPE Per Phase												
All HVDC	1 PPE Per Phase												
	Version v11 May 2022												