

Example 8D: Connection of housing development with load transfer

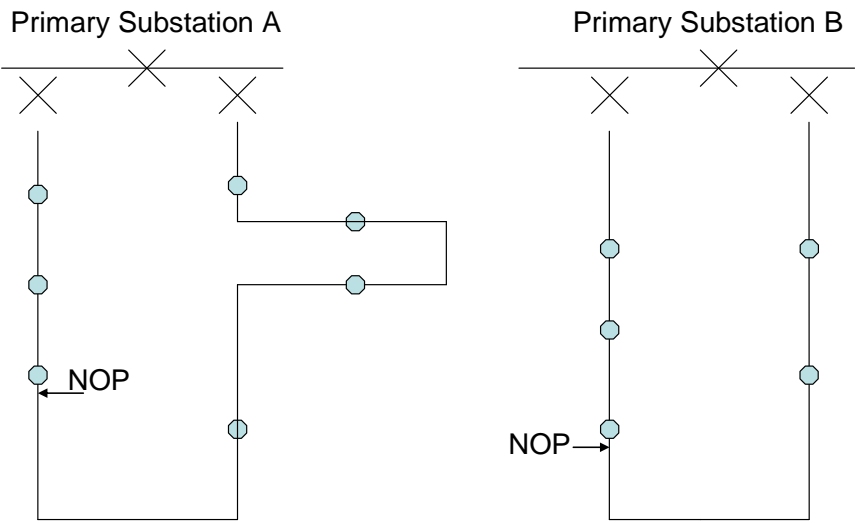
An additional variation shows the arrangements that will apply where it is necessary to reconfigure the Distribution System so that existing demand may be transferred in order to release capacity for the new connection.

A new housing development has a Required Capacity of 2MVA to serve 900 plots. The local 11kV feeder has a network capacity of 7.7MVA based upon the limitation of the existing 400 Amp circuit breakers at Primary Substation A. The existing load on the circuit is 7.6MVA. It is therefore not possible to connect the new load to this circuit as presently configured.

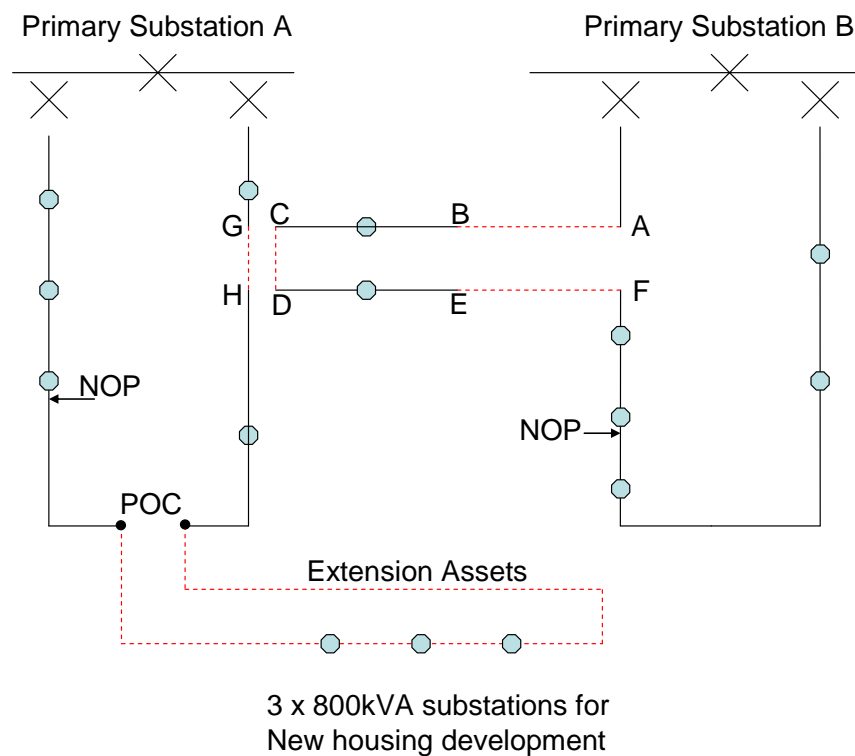
It is proposed to reconfigure the Distribution System such that two existing substations may be transferred on to an adjacent network, in order to release capacity so that the new connections can be made. Primary Substation B has sufficient spare capacity to accommodate the two existing substations. New cables are to be installed between points A – B and E – F. The existing circuit will be cut at point BE so that the new joints can be made. The total cable length between points A – B, and E - F is 100m. The network will be reconfigured by installation of two short straps C – D and G - H in order to maintain connectivity.

This transfer of existing demand will allow a POC to be taken from the local 11kV circuit to supply the new development. The newly installed cable to connect the development from the POC is 1200m long. Three 800kVA distribution substations are to be established onsite. The above work represents the Minimum Scheme to provide connections to the new site.

Original network:



Proposed network:



The Connection Charge for this Scheme is calculated as follows:

Extension assets

| | Cost | Apportionment | Customer Contribution |
|--|----------|---------------|-----------------------|
| Contestable Work | | | |
| 1300m of 11kV cable including A-B, C-D, E-F, G-H and from POC to the development | £120,000 | n/a | £120,000 |
| 3 by 800kVA distribution substations | £150,000 | n/a | £150,000 |
| On site LV mains and services | £330,000 | n/a | £330,000 |
| Non Contestable Work | | | |
| 10 by 11kV closing joints at POC and at points | £25,000 | n/a | £25,000 |

| | | | |
|-------------------------------|----------|--|----------|
| A,B,C,D,E,F,G,H | | | |
| | | | |
| Total extension asset cost | £625,000 | | £625,000 |
| CiC charges | | | £3,500 |