Given line-line voltage = 4400.0000 V

Impedance of the load = 20.0000 /_ 30.0000 ohms

Impedance of the line = 1.4000 /_ 75.0000 ohms

Base Voltage = 4400.0000 V

Base Current = 127.0000 V

Base Impedance = 20.0027 V

Van = 2540.3412 /_ 0.0000 V

Ian = 127.0171 /_ -30.0000 V

Per-unit Quantities

Per Unit line-line voltage = 1.0000 /_ 0.0000 per unit

Per Unit line-neutral current = 1.0001 /_ -30.0000 per unit

Per Unit line-neutral voltage = 1.0507 /_ 2.7002 per unit

Per Unit line impedance = 0.0700 /_ 75.0000 per unit

Per Unit load impedance = 0.9999 /_ 30.0000 per unit

The line to neutral voltage at the substation , VLN = 2669.0452 /_ 0.0000 V

The magnitude of the voltage at the substation bus , VLL= 4622.9218 V