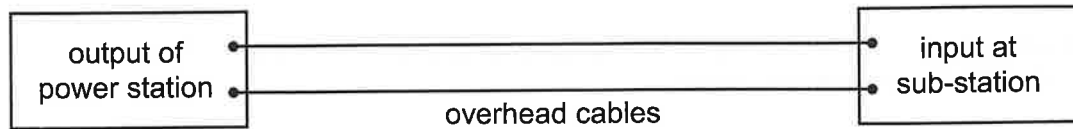27 Electrical power is transmitted from a power station to a sub-station by two overhead cables each of length 100 km.

The potential difference at the output of the power station is 400 kV and the resistance per unit length of the overhead cables is $0.030\,\Omega\,\text{km}^{-1}$.

When the power at the output of the power station is 100.00 MW, what is the power input to the sub-station?

A 99.63 MW **B** 99.81 MW **C** 99.91 MW **D** 100.00 MW