**Rhodders WF electrical losses - in Private Cable**

**Upper Aluminium section of Private Cable - Losses**

Aluminium section resistance in Ohms per km 0.0367 Ohms
Aluminium section route length 5.2 km
Directly buried cable rating = 780Amps

Max generation (MW) 12.3

| Generation in percentage | Generation in MW | | Cable current (Amps) | Total resistance in Ohms | cable losses = $I^2$x R (kW) |
|---|---|---|---|---|---|
| | | | | | |
| 100 | 12.3 | | 226.53 | 0.19084 | 9.79 |
| | | | | | |
| 75 | 9.225 | | 169.90 | 0.19084 | 5.51 |
| | | | | | |
| 50 | 6.150 | | 113.26 | 0.19084 | 2.45 |
| | | | | | |
| 25 | 3.075 | | 56.63 | 0.19084 | 0.61 |
| | | | | | |
| 0 | 0 | | 0.00 | 0.19084 | 0.00 |
| | | | | | |

**Lower Copper section of Private Cable - Losses**

Copper section resistance in Ohms per km 0.05 Ohms
Copper section route length 1.3 km
Directly buried cable rating = 745Amps

| Generation in % | Generation in MW | | Cable current (Amps) | Total resistance in Ohms | cable losses = $I^2$x R (kW) |
|---|---|---|---|---|---|
| | | | | | |
| 100 | 12.3 | | 226.53 | 0.065 | 3.34 |
| | | | | | |
| 75 | 9.225 | | 169.90 | 0.065 | 1.88 |
| | | | | | |
| 50 | 6.15 | | 113.26 | 0.065 | 0.83 |
| | | | | | |
| 25 | 3.075 | | 56.63 | 0.065 | 0.21 |
| | | | | | |
| 0 | 0 | | 0 | 0.065 | 0.00 |

**Total Private Cable electrical losses**

| Generation in % | Total losses kW |
|---|---|
| | |
| 100 | 13.13 |
| | |
| 75 | 7.38 |
| | |
| 50 | 3.28 |
| | |
| 25 | 0.82 |
| | |
| 0 | 0.00 |