

FTTP vs FTTC Install Costs

Location: Totter oak and Little Sodbury End

Date: 2016-03-12

This tries to estimate a rural FTTP vs FTTC install and overall basic costs for 10 years for discussion.

These are costs above an existing copper telephone/ADSL system.

Assumes existing ducting use and overhead cables for the premises connection.

Rural area uses overhead cabling to premises exclusively.

No contingency costs etc are included and assume efficient working

This is rough. There are likely to be errors/inaccuracies, please feedback issues.

1. Assumes 50% take up of new FTTP/FTTC services
2. Assumes existing copper lines are at 50% expected lifetime, thus effective install costs can be reduced
3. Assumes replacing a copper line is the same cost as replacing a fibre line (fibre is actually cheaper)
4. Extra income: Assumes customer would keep existing ADSL rather than use another company/option if lines were not updated.
5. FTTP Assumes 25% take-up of higher speed services @ £100 per customer year extra
6. Prices are costs from figures found on the Internet and so could be out ...

48-fibre cable (material and installation in existing ducting) £2.75 per meter, lifetime 20 years (TalkTalk 2013 costs)

Gigaclear charges £2.50/metre for installing last meter fibre underground

Overhead 24-fibre fibre costs per metre £3.00 (estimate).

Number of premises	20
Fibre backbone length in metres	2000
Extra income per year per customer over and above existing ADSL	100
FTTC Power costs/maintenance/upgrades per customer per year	14

FTTC

Item	Qty	Cost	Fixed	SubTotal	Notes
Admin/Design	5	200	0	1000	
Trunk fibre installed in existing ducting (Qty in metres)	2000	2.75	0	5500	
Cabinet and Electronics with planning and install	1	15000	0	15000	
General install costs per customer	10	50	0	500	
Total Install Costs				22000	

10 Year costs

Reduction based on existing cable replacement lifetime	0	0	-2750	-2750	3
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Reduction based on 10 years of 50% extra customer income	100	-100	0	-10000 4
Power costs and electronics maintenance costs	100	14	0	1400
				-11350

FTTC Overall Total Cost above existing (10 years) 10650

FTTP

Fibre to individual premises cost (overhead cable)

Item	Qty	Cost	Fixed	Notes
Overhead fibre install (Qty is average meter length per premises)	100		3	100 400

Item	Qty	Cost	Fixed	Notes
Admin/Design	5	200	0	1000
Trunk fibre installed in existing ducting (Qty in metres)	2000	2.75	0	5500
Fibre on overhead line to each premises from above (100% of premises)	20	400		8000
Fibre splices/splitters and installation			3000	3000 ?
General install costs per customer	10	50	0	500
Total Install Costs				18000

Reduction based on existing cable replacement lifetime			-6750	-6750 3
Reduction based on 10 years of 50% extra customer income	100	-100	0	-10000 4
Can charge higher for higher bit rates and better service	50	-100	0	-5000 5
				-21750

FTTP Overall Total Cost above existing (10 years) -3750

Conclusions

Figures are full costs, public/community would be charged a percentage of install costs (25 - 50% ?) or 10 year cost + interest ?

Figures assume that BT/Openreach would keep customers on ADSL rather than lose them if this upgrade did not happen.

If rural community can agree to a complete copper to fibre swap, take-up numbers would be much larger for FTTP.

Reduction in maintenance costs of FTTP vs FTTC cabling is not included.

This ignores the fact that after 5 - 10 years FTTC will be obsolete and FTTP will need to be installed anyway.

FTTP installation would probably have a 20 – 30 year (?) life time.

FTTP is future proofed as speeds can increase dramatically as needed and all customers will receive the same service regardless of location.

From this install costs are about the same, but over 10 years FTTP looks to be close to being commercially viable while FTTC requires public/community funding.