



Rating Fibre Optic Networks – An Industry Perspective

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Geo.
Own Your Network

Rates – The Impact on Investment



Geo has constructed a model that calculates:

- **The extent of commercially viable network roll out based on rates liability for new network build (presented to BDUK 07/10);and**
- **Rates as a proportion of total network operating costs for large and small operators (presented to BIS 01/11).**

* The model uses data and costs from the BSG Final Report: The cost of deploying fibre-based next-generation broadband infrastructure. 8 September 2009 Ref: 12726-371

* 6% of connections are business connections based on a typical non-London exchange (source Samknows Broadband - <http://www.samknows.com/broadband/index.php>).

* NGA service take up assumed to be c52% after 8 years based on current broadband take up of Virgin Media services where available.

Rates – The Impact on Investment

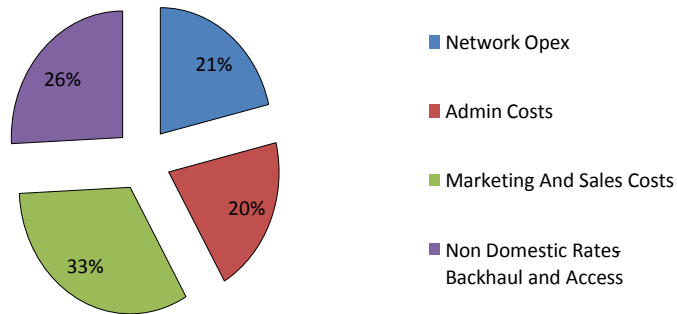


Classification criteria (distances are straight line)	Fibre Rates	
	Status Quo	Removed
Inner London	34%	57%
Major city (pop = 500k+)	12%	21%
City (pop = 200k+)	6%	12%
>20k lines, <2km from exchange	9%	16%
>20 000 lines, >2km from exchange	0%	2%
>10 000 lines, <2km from exchange	6%	11%
>10 000 lines, >2km from exchange	0%	0%
>3,000 lines, <1km from exchange	5%	9%
>3,000 lines, >1km from exchange	0%	0%
>1,000 lines, <1km from exchange	0%	1%
>1000 lines >1km from exchange	0%	0%
<1000 lines, <1km from exchange	0%	0%
<1000 lines >1km from exchange	0%	0%
Overall coverage	6%	11%
Fibre to The Premises 000s	1,671	3,005
Incremental Premises 000s	1,671	1,334

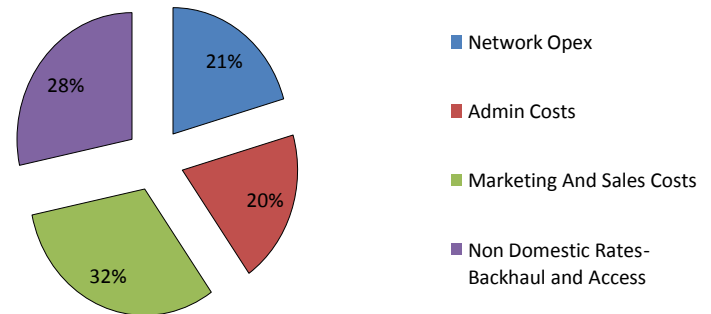
Remove fibre rates and the market could double broadband coverage with its investment.

Rates – The Impact on Investment

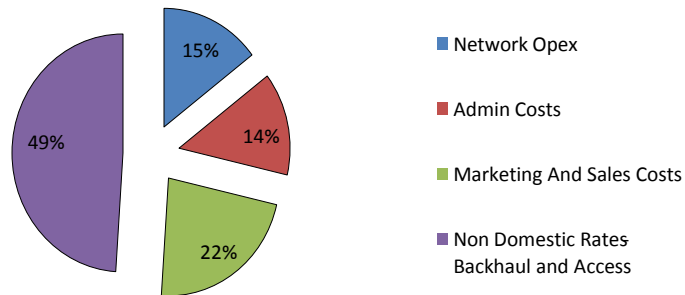
City (pop = 200K+) as proportion of Opex (excl Decap costs)
Part of Network



>3,000 lines, >1km from exchange as proportion of Opex (excl Decap costs)
Part of Network



>1,000 lines, >1km from exchange as proportion of Opex (excl Decap costs)
Part of Network



Rates as a proportion of costs for a large network operator

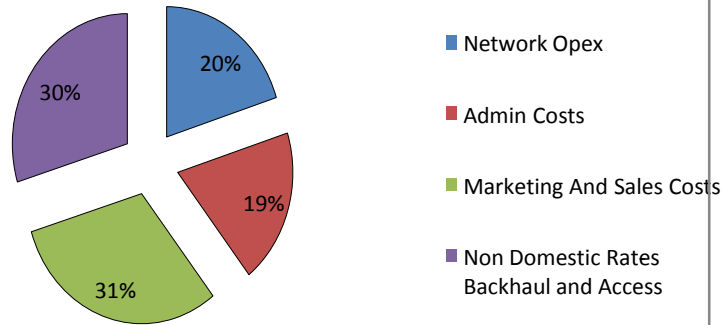
*Model assumes operator owns the backhaul network (excludes backhaul costs)

*Model assumes operator owns the access infrastructure (excludes duct rental)

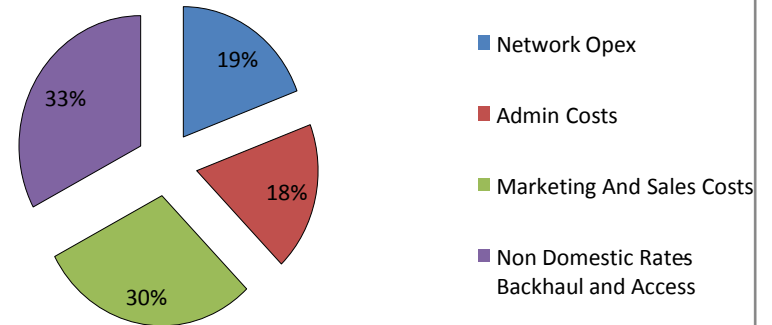
Rates – The Impact on Investment



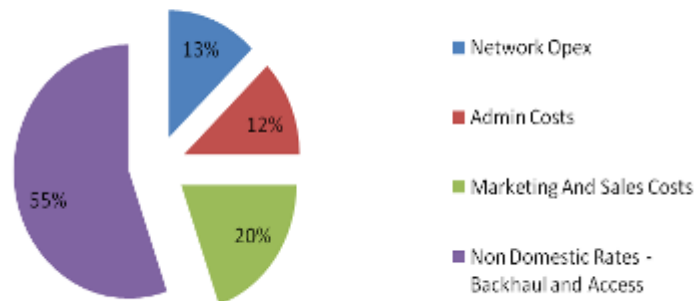
City (pop = 200K+) as proportion of Opex (excl Decap costs)
single hereditament



>3,000 lines >1km from exchange as proportion of Opex (excl Decap costs)
single hereditament



<1,000 lines >1km from exchange as proportion of Opex (excl Decap costs)
single hereditament



Rates as a proportion of costs for a small network operator

*Model assumes single hereditament and excludes backhaul costs

*Model assumes operator owns the access infrastructure (excludes duct rental)

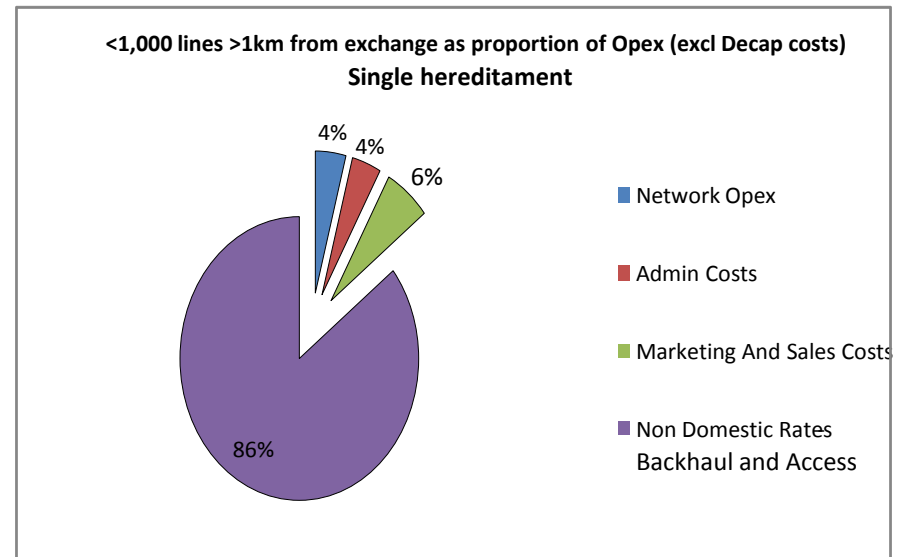
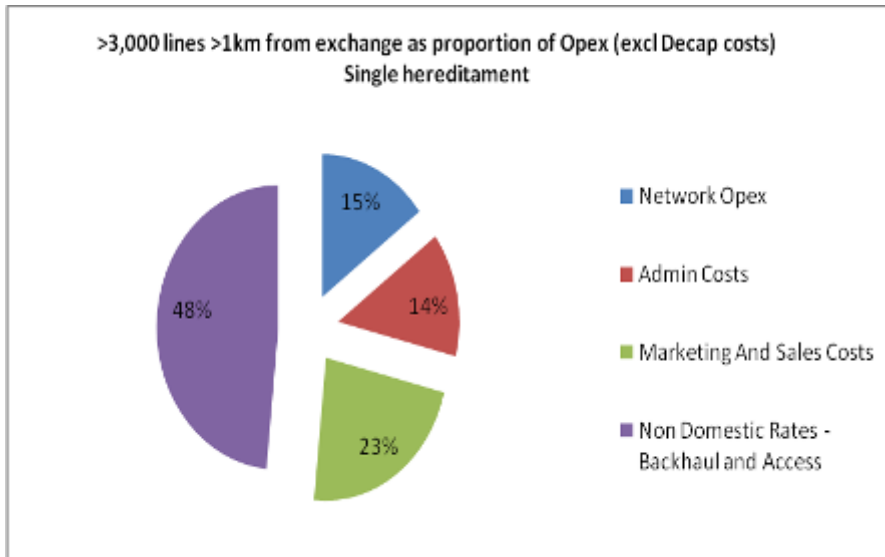
Rates – The Impact on Investment



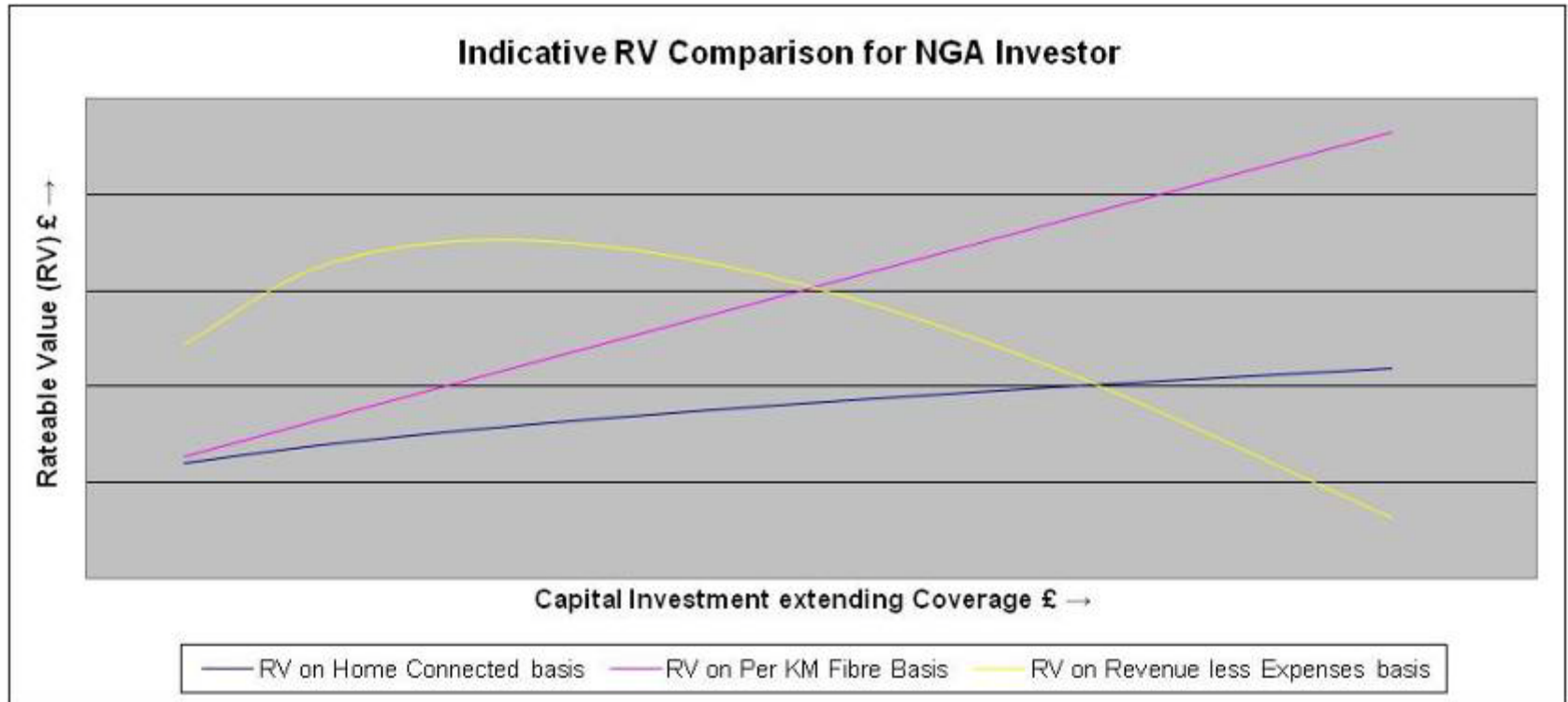
Rates on rural networks

*Model assumes single hereditament and excludes backhaul costs

*Model assumes operator owns the access infrastructure (excludes duct rental)



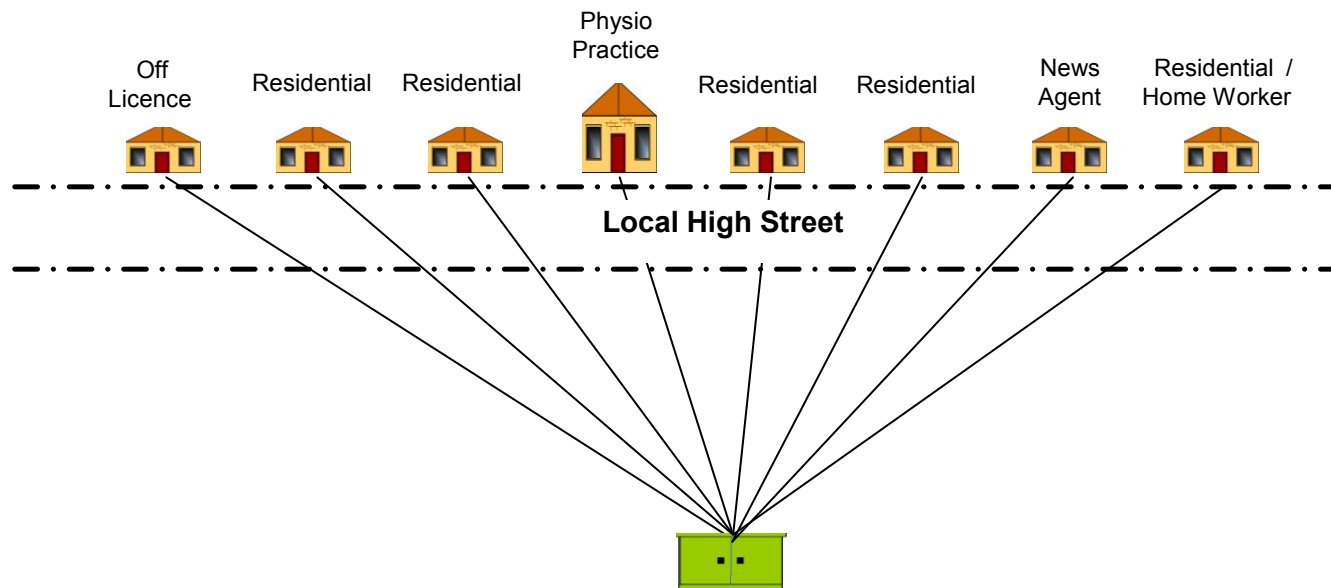
Rates – Tone of List vs R&E Method



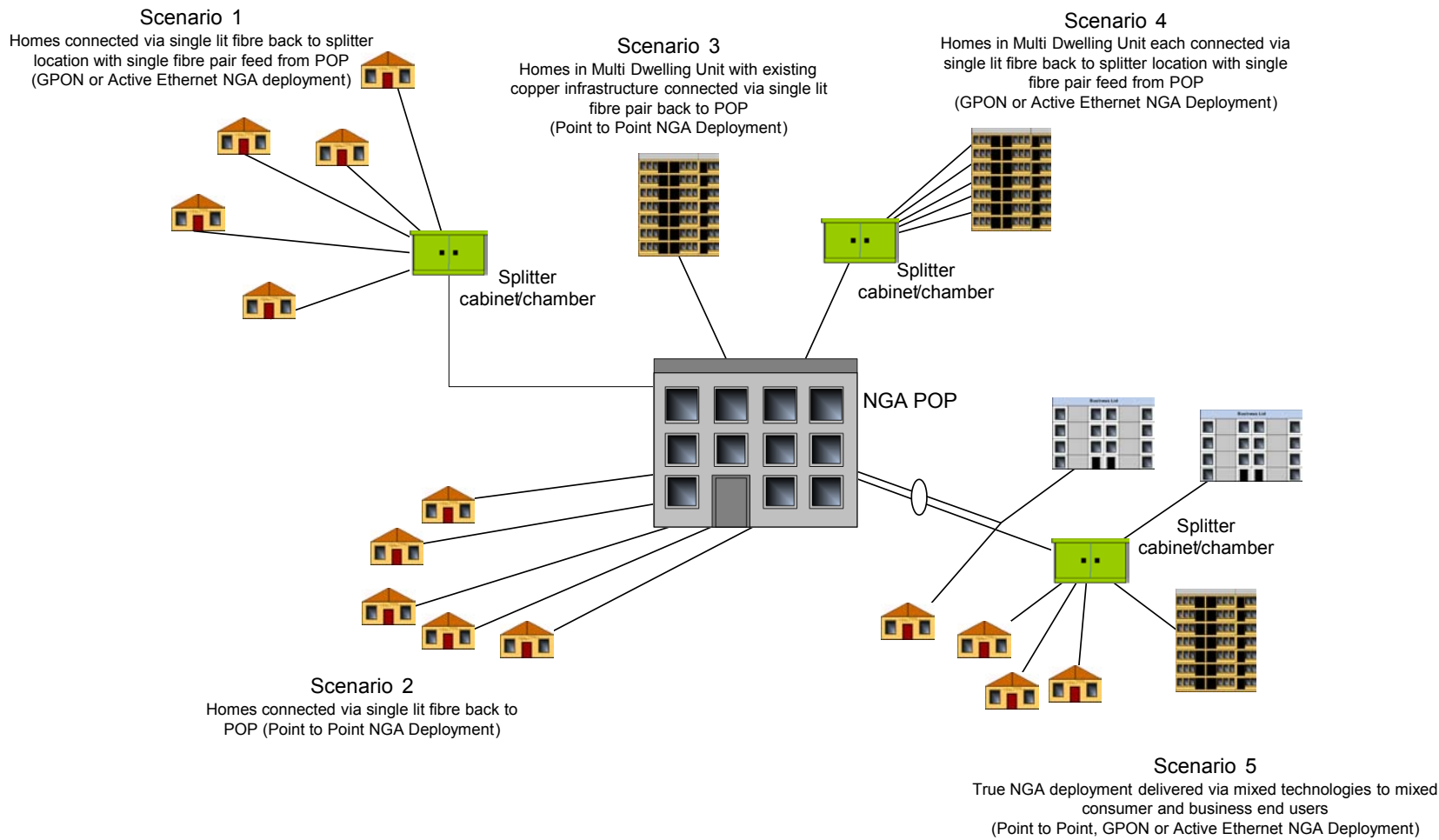
Rates – NGA Networks

Open Access/Wholesale NGA Networks:

- How do you rate a mix of residential and business connections?
- Who is responsible for auditing and disclosing the connection?
- How do you manage complexities of shared infrastructure?
- How do you apply the formula to mass deployments, millions of connections?
- What if technology and topologies change rapidly?
- What is the cost to operators, businesses and administrators?



Rates – NGA Networks



Rates – Conclusion



- Rates are a disincentive to investment in NGA networks
- Different valuation methods make the market anti-competitive and penalise small networks
- Rating NGA networks will make investment uneconomic in rural areas and the final third

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