Wigley & Company
BARRISTERS and SOLICITORS

PPPs and Fibre Broadband Networks

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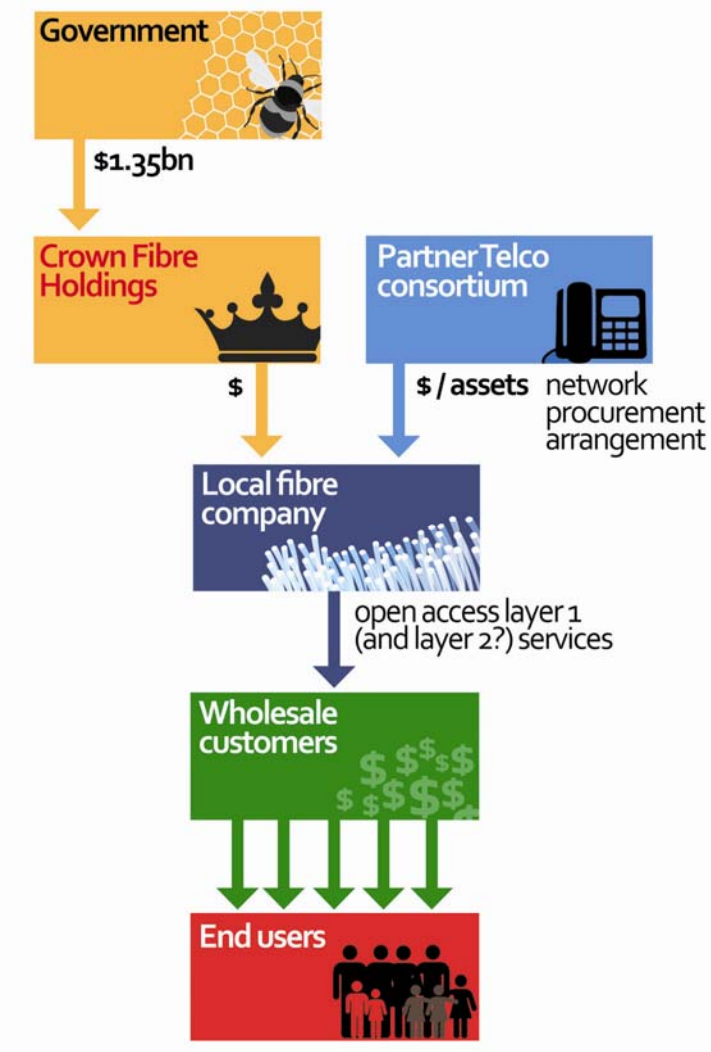
We summarise two models where government is funding national fibre networks in conjunction with the private sector: Singapore and New Zealand. Various countries are advancing such networks – such as Australia – with some having PPP procurement constraints (e.g. the EU procurement rules). We deal with the latest Australian development in our article on last week's KPMG-McKinsey report for the National Broadband Network. These solutions all pose some challenges. We deal with public sector procurement requirement in our article *Some interesting procurement issues for PPPs and other complex public procurement: the UFB initiative*.



1. New Zealand

1.1 In addition to a separate rural broadband scheme, Government is funding partnerships with the private sector, to achieve fibre-to-the-premises networks to 75% of the country's population. The aim is to complete the roll-out within 6 to 10 years. Just under NZ$1.5Bn (US$1Bn) is available. Government's objective is to have open access Layer 1 dark fibre service available to all wholesale customers (and in turn end-users).

Funding structure

1.2 The vehicle for supply of the Layer 1 services to wholesale customers is – as in the diagram – the Local Fibre Company (LFC). A LFC can be set up for each of 33 separate regions. The shareholders in the LFC are:

(a) government, via a company that it owns, Crown Fibre Holdings (CFH); and

(b) the successful commercial bidder (Partner) for the area covered by the LFC. (The successful bidder could be a consortium.)

1.3 CFH is a Crown company (i.e. a company fully-owned by government with a board of directors managing the company).

1.4 Providers can bid for any or all the regions. Only two bidders have put in national bids: incumbent, Telecom, and Canadian company, Axia (which leads the successful Layer 1 provider in Singapore and elsewhere). Other interested bidders include electricity lines utilities, local body-based bidders, and existing regional fibre network operators.

1.5 The theory is that the approx. $1.5Bn is used to fund the Partner to build out the core network (broadly all of the regional network except the end-user's connection to the network). This is done under a build contract between the LFC and the partner. A common view is that this will be challenging to achieve at that level of funding, so that the base model may need to change. Bids are confidential so this is not clear. As noted below, funding comes back into the LFC via the Partner, so this can be used for subsequent core network funding. Additionally, Partners may contribute funds and assets to top up the Government contribution.

Layer 2 services

1.6 In addition to Layer 1 services, the LFC, if approved by the CFH, can also provide Layer 2 bitstream services on an open access basis. This is probably to be funded only by the Partner, and provided through an LFC subsidiary.

Risk allocation

1.7 Fundamental to the model is the allocation of risk, to accelerate the build of dark fibre infrastructure and services. Allocation of risk between CFH and the Partner incentivises optimal outcomes. If the model largely in its current form is applied:

(a) government, via the CFH's funding of the fibre roll-out, takes the risk as to end-user uptake during an initial concession period, which is 10 years. The funding extends to the core fibre network (in broad terms, all but the connection to the end user from the core network). (However, bidders can elect to contribute also to the cost of the core network build: that may help overcome any problem with funding of the core network out of the $1.5Bn);

(b) the Partner takes the risk of any cost-over run for the build (and carries overhead/establishment costs);

(c) the Partner is encouraged to expedite addition of end-users to the network. Under the structure, its share in the LFC increases (ultimately, to take over the majority of the CFH shares if the initiative is successful). Also, every new customer connected (at the Partner's cost) leads to increased revenues flowing to the Partner, with increased shares as well in LFC); and

(d) the Partner takes the risk of operational effectiveness. Maximum revenue streams – based on the price per end user, payable by the wholesale customer of the LFC – are set at the outset. (In an amendment, bidders can submit de-averaged prices to accommodate connections which are more expensive to connect. This is a very significant change on a policy basis.)

1.8 This allocation of risk is achieved by a series of complex transactions and arrangements,[1] including:

(a) allocation of all LFC dividends in the 10 year concession period to the Partner;

(b) shareholding and other agreements.

(c) two different classes of shares,[2] with differing rights;

[1] Overviewed in the Ministry for Economic Development's ITP for UFB.

(d) Partner's shareholding reflects contribution by cash and in kind (such as transfer of existing infrastructure);

(e) as each new end-user is connected to the core fibre network, at the Partner's cost, thereby generating cash-flows to the LFC, the Partner is allocated additional shares;

(f) a network procurement contract between the LFC and the Partner, funded by CFH-sourced funds plus any contribution by the Partner (and, probably, an operation and maintenance contract between the Partner and the LFC); and

(g) put and call options.

Management and control of the LFCs

1.9 During the 10 year period each LFC is managed by a board of directors with three directors appointed by each of CFH and the Partner respectively, plus an independent chair. With one major exception, after the 10 year period, Partners, reflecting their increased shareholdings, can get majority control of the board.

2. Special rule for vertically integrated operators

2.1 This is the major exception. Where the Partner is a vertically integrated operator, it never gets majority control. The equal director-plus-independent-chair model remains regardless.

2.2 In particular, that makes it difficult for the incumbent, Telecom, to become a Partner. Yet it has the ubiquitous copper network, a Fibre to the Cabinet network over the same footprint, and existing infrastructure available for use, not to mention the existing customer base.

2.3 The rationale is clear enough: to encourage truly open access at the Layer 1 level without the problems said to be created by vertically integrated operators with bottleneck control. Nonetheless, this is a call as big as the decision to inject $1.5Bn to augment the input by the private sector. Whatever one's views on this controversial issue, it is a complex matter.

2.4 However, there are a variety of ways in which Telecom can become involved, one way or another. Singapore is a great illustration of this: Singtel, the incumbent, contributed its ducts and related infrastructure – not its copper network – late in the process: no doubt under commercial pressure caused by the way the initiative was panning out.

3. Structural separation

3.1 From the press, it appears that Telecom is therefore seriously considering structurally separating its network operation from its retail operation (and probably its wholesale operation). In this way it can seek, for example, to fold in existing network assets into LFCs including the copper network (with its VDSL capability). It might retain minority interests in the separated network company that becomes a Partner.

3.2 Telecom, like BT, already has a functionally separated network division. Structural separation involves the network being separately majority-controlled by a company other than Telecom. With functional separation, Telecom still owns the network company.

3.3 There is increasing interest in Telcos structurally separating their networks, particularly as the business models for networks and retail differ so markedly. However, others have struggled to produce a model that is viable (for example, Babcock & Brown, then owners of Eircom in Ireland, were unable to achieve this). It may be that UFB is driving Telecom to structural separation for reasons unrelated to other underlying business drivers for Telecom.

[2] Government gets a single share in each LFC, which is used to ensure ongoing compliance with open access and other obligations.

4. Setting the wholesale price per end user connection

4.1 This maximum price is agreed between the Partner and CFH at the outset, and is adjusted annually to reflect inflation.

4.2 This is an interesting method of deriving the price for what is a largely monopoly service. Contract is the instrument used to achieve what regulation would otherwise achieve.

The price can still be changed by regulation

4.3 This does not rule out regulation later changing that price particularly as this will be a bottleneck service. However, under New Zealand's telecoms regulatory system, that would require approval by the regulator and by the Minister responsible for telecommunications.

4.4 The contract (or even regulation now) cannot commit future regulators and Ministers to stick with the contractual cap. Neither contract nor regulation can stop later change, as court cases confirm.

4.5 So, a commitment by Government that it will not regulate away from the contracted price is not binding.

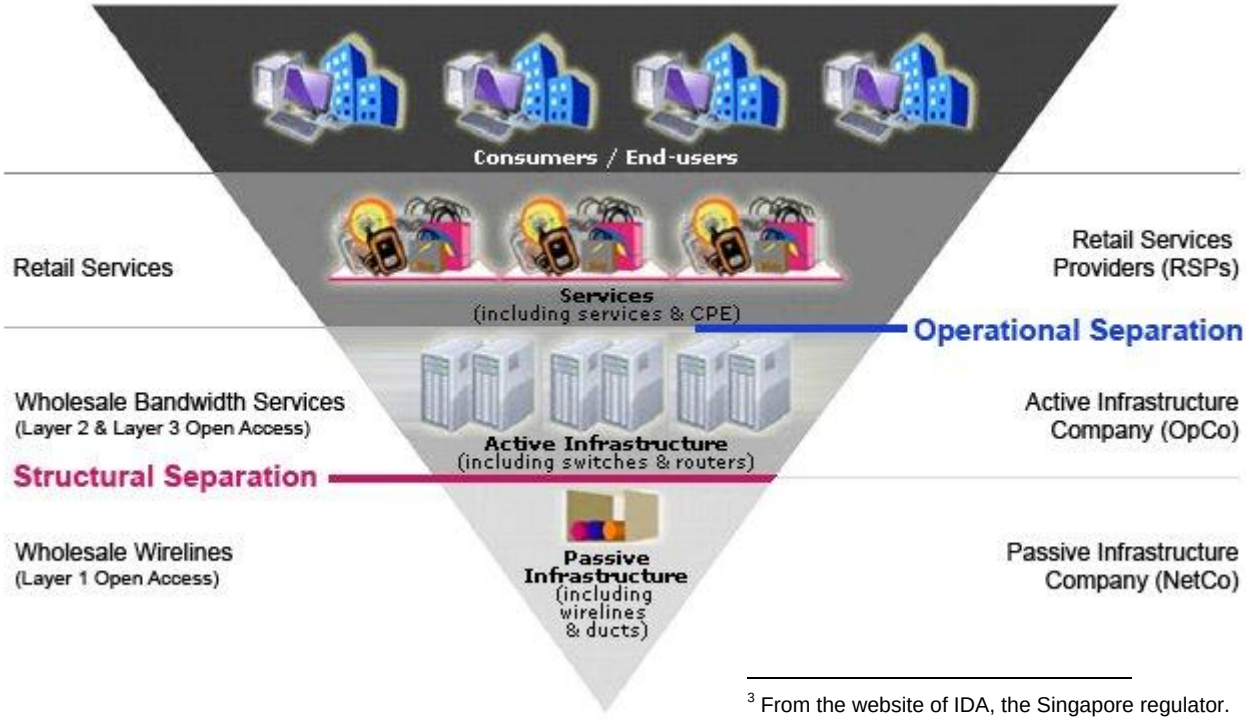
4.6 While bidders will factor in this risk, both the regulator and government will take into account the importance of incentives to invest before moving away from the contract model.

5. Singapore

5.1 Rolling out fibre-to-the-home in Singapore is a different challenge given the small size of the country and end-users closely located, often in high-rise buildings.

5.2 As the diagram below shows,[3] the Singapore model has a Netco supplying the Layer 1 services. The role of rolling out and operating Netco was awarded to a consortium put together by Axia (which is also bidding in New Zealand). Near the end of the process, incumbent, Singtel, decided to roll its ducts and related infrastructure into the NetCo, via AssetCo. This illustrates the options available to incumbents: Singtel retained its copper line business.

5.3 NetCo is structurally separated from the other layers of the industry.



[3] From the website of IDA, the Singapore regulator.

5.4 NetCo supplies Layer 1 access to OpCo, which is a functionally separated operation, supplying Layer 2 connectivity, also on open access terms, to retail service providers. NetCo is owned by Singapore provider, Starhub.

5.5 The combination of open access-based structural and functional separation is the method the Singapore regulator has used to achieve preferred outcomes.

We welcome your feedback on this article and any enquiries in relation to its contents. This article is intended to provide a summary of the material covered and does not constitute legal advice. We can provide specialist legal advice on the full range of matters contained in this article.

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