



TELSTRA CORPORATION LIMITED

**Response to the 2010 Domestic Transmission Capacity Service
Pricing Review**

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Executive Summary

This submission sets out Telstra's response to the Australian Competition and Consumer Commission's (ACCC) April 2010 Discussion Paper reviewing the pricing of the domestic transmission capacity service (DTCS).

Telstra makes four principal points, as identified below. Telstra's responses to the specific questions raised by the ACCC are included at Attachment 1. Telstra also includes an expert report from LECG identifying the intractable difficulties with international benchmarking of the DTCS – a pricing approach which Telstra does not support for this service.

1. **Competitive routes should be removed from the scope of any price regulation, consistent with the conclusions of Frontier Economics**
 - **Regulation of competitive routes is not appropriate:** Prior to determining any new pricing principles for the DTCS, regulation should be removed from those routes that meet the ACCC's own criteria for exemption from regulation. Furthermore, competition in the market exists in circumstances that go beyond the ACCC's currently-established criteria. If price regulation were applied in such circumstances, it would risk interfering in the competitive process that already exists and lead to market distortions.
 - **ACCC has stated that three or more fibre providers are sufficient:** The ACCC has recognised that regulation should not apply to any DTCS routes with three or more fibre providers. The ACCC is able to identify such routes from the Infrastructure RKR data it has gathered from industry participants and remove regulation on these routes prior to resolving any new DTCS pricing principles.
2. **General pricing principles are sufficient to guide commercial negotiations and hence there is no need for further regulation**
 - **Vigorous competition exists and is intensifying on competitive routes:** There is no evidence of market failure that warrants *ex ante* price regulation. As competition has intensified over the past decade, there have been substantial price reductions. Even on those routes with Telstra as the sole fibre provider, Telstra's market power is constrained by the triple threats of potential competition (including from technologies other than fibre), customer self-build and *ex post* regulatory intervention.
 - **The current light handed approach to DTCS regulation is appropriate:** The current regulatory approach gives precedence to commercial negotiation, while allowing the ACCC to arbitrate any disputes that may arise. There is no reason to depart from this approach or adopt a further regulation (such as determination of price points), which would put at risk future investment and competition.
 - **No evidence of any failure of commercial negotiations:** The DTCS has now been declared for over 13 years. Only four access disputes have been notified in that period and all were resolved commercially.

- **General pricing principles are sufficient:** The ACCC already has sufficient powers to resolve DTCS pricing issues if they were to arise. Similar ex post regulatory powers will continue to apply if the regime is amended in the manner contemplated by the Government.
 - **NBN Co will further increase competition:** NBN Co services will increase demand for backhaul and create growth opportunities that will further intensify competition for DTCS. Further, indications that NBN Co may build capacity without the expectation of a commercial return will place downward price pressure on existing operators.
3. **Determination of ex ante DTCS price points is highly complex and subject to significant uncertainty, leading to a material risk of unintended market distortions**
- **DTCS is a complex service with a myriad of commercially-evolved price points:** The cost structure of transmission services is far more complex than other declared services. Any regulated price-setting would need to account for factors such as route distance, capacity and utilisation.
 - **Multiple carriers provide transmission services:** Transmission services are provided by a number of other carriers, besides Telstra. The technologies used by other carriers and their network architectures would need to be taken into account in any price determination, greatly increasing the complexity and cost of determining price points for the DTCS.
 - **DTCS investment is sensitive to DTCS pricing:** Investment in transmission infrastructure is critical, given the likely future growth in bandwidth demand. The ACCC should be wary of intervening in a manner which reduces continuing competitive rollout by preventing transmission providers achieving a reasonable return on any new investments. Further DTCS regulation at this time risks discouraging future investment in new transmission technologies and critical infrastructure.
 - **Product scope of DTCS is not yet resolved:** The ACCC is yet to finalise its inquiry into whether the product scope of the DTCS should be extended to include certain Ethernet services. While Telstra firmly believes any extension to the service description to include other services is unnecessary, pricing principles cannot meaningfully be assessed without first knowing the precise scope of what is being regulated.
 - **Other critical issues are not yet resolved:** A number of other critical issues could affect DTCS pricing, and any regulatory approach will need to be flexible enough to anticipate them. These issues include the treatment of subsidised entry (eg Backhaul Blackspots program), and whether or not a regulatory asset base (RAB) approach is adopted in other contexts.
4. **The ACCC should adopt pricing principles for the DTCS that reflect competitive market outcomes**
- **Prices should reflect competitive market outcomes:** The best means of achieving this outcome for DTCS is to promote ongoing market

competition. The ACCC need not determine regulated prices at this time, while market mechanisms are growing strongly, but could adopt the general principle that prices should reflect competitive market outcomes. Each of the cost methodologies available for determining prices has serious deficiencies in the context of the DTCS.

- **Bottom-up TSLRIC+ is complex and prone to a high risk of error:** The ACCC has previously indicated that it considers TSLRIC-based pricing to be in the long-term interests of end users (LTIE), although it is presently under review. Due to the complexity and broad scope of the DTCS, estimating TSLRIC in this context is likely to be prone to a high risk of error.
- **Application of a RAB-DORC methodology would be premature at this time:** RAB methodology is presently under consideration by the ACCC in another context, but that consideration is not complete. It would be premature to form any conclusion for DTCS at this time.
- **Benchmarking has serious limitations, especially due to utilisation differences for Australia:** Both the ACCC and the ACT have noted the limitations of international benchmarking, including the challenges of controlling for cross-country differences. Due to Australia's very low population density, infrastructure utilisation on regional routes is substantially lower than in other countries. Accordingly, Australia experiences much higher unit costs, rendering international benchmarking unreliable. Domestic benchmarking may be more informative, but only where appropriately calculated and based on competitive routes in like circumstances, not other regulated routes.
- **Top-down costing is too arbitrary in its allocation of costs:** Use of Telstra's historic accounts would not be an appropriate basis for DTCS pricing, as it would depend on complex and potentially arbitrary allocation rules.

The DTCS has been characterised by rapidly growing demand, substantial investment and an increasing level of competition, with very little regulatory disputation and, more recently, significant rollback of regulation. The ACCC's assessment of DTCS pricing should look to support and encourage this positive trend by maintaining a light-handed approach to regulation and continuing to roll back regulation where workable competition exists. Telstra submits that the pricing principle for the DTCS should be one that reflects competitive market outcomes. Regulatory determination of price points would be an unnecessary and highly complex exercise and would not be in the LTIE. Whilst there a number of methodologies identified, each one has major flaws. None of these methodologies could be applied without creating uncertainty and risking harm to continuing investment and growth in market competition, which remains the best means of ensuring competitive pricing.

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A Competitive routes should be removed from the scope of any price regulation

A.1 Price regulation of competitive routes is not appropriate

Price regulation should not be applied to those routes of the DTCS that meet the ACCC's own criteria for exemption from regulation. Any such price regulation of competitive routes will not be in the long-term interests of end-users so would not meet the statutory criteria set out in section 152AB of the *Trade Practices Act 1974 (Cth) (TPA)*.

Price regulation of routes that are competitive or contestable interferes with the competitive process and leads to significant market distortions. Such excessive regulation discourages investment in transmission infrastructure and blunts competitive tension in otherwise competitive transmission markets.

Before determining any new pricing principles for the DTCS, the ACCC should therefore update the geographic scope of DTCS regulation by varying the service declaration for the DTCS and removing from regulation transmission services which are subject to competition. By doing so, the ACCC will ensure that any price regulation is confined to those geographic areas where declaration remains appropriate.

Any such variation to the DTCS to adjust the scope of regulation could be made in the context of the ACCC's current inquiry into the variation of the DTCS declaration.

A.2 ACCC has stated that a route is competitive if three or more fibre providers exist

The ACCC has concluded that regulation should not apply to any DTCS routes with three or more fibre providers (**T+2 test**).

The application of any price regulation to transmission routes with three or more fibre providers would undermine the ACCC's previous conclusions. Therefore if any price regulation is to apply to the DTCS, then any competitive routes must first be excluded from the scope of such price regulation.

Specifically, the ACCC has observed that maintaining the declaration of services where there is sufficient competition can harm the long-term interests of end users.¹

¹ ACCC, "Transmission Capacity Service, Review of the Declaration for the Domestic Transmission Capacity Service", Final Report, April 2004, p 45: "...where a service remains declared when there is effective competition in the provision of that service, declaration can reduce efficient investment more broadly in the market. This is on the basis that it can maintain reliance on the main supplier in the market, thus reducing efficient investment by access seekers in utilising alternative suppliers or service and hence the ongoing investment in infrastructure by these alternative suppliers. This in turn can be deleterious to maintaining competition and in delivering service diversity to end users in the longer term..."

In its November 2008 final decision regarding Telstra's DTCS exemption applications, the ACCC also relevantly concluded that an exemption or removal of competitive routes from the DTCS declaration will promote competition.²

The T+2 test has formed the basis of two previous decisions by the ACCC granting Telstra exemptions on the basis that removing regulation would promote the LTIE:

- In 2004, the Commission re-declared the DTCS, but decided that where there were two or more optical fibre competitors on a particular route in addition to Telstra, the route was sufficiently competitive for regulation to be withdrawn (over a 12 month transition period). In its report, the ACCC indicated that "*where there are at least three optical fibre providers... this serves as evidence of sufficient competition/ contestability to warrant removal of that route from declaration*".³ The ACCC found that transmission routes meeting this criterion could be considered competitive.
- In November 2008, the ACCC granted Telstra exemptions from the obligations referred to in section 152 AR of the TPA in respect of the DTCS for routes where it was established that Telstra plus at least two other optical fibre competitors existed.⁴ The ACCC found that removal of regulation on competitive routes would be in the LTIE since it would strengthen incentives for efficient investment and lead to greater competitive tension:⁵

"...The ACCC considers that future demand for transmission services is likely to increase and that the removal of the regulated DTCS in markets which are competitive and/or contestable may provide an incentive for owners of optical fibre networks to make such an investment either to meet increasing demand or in response to a SSNIP of the Telstra DTCS. The ACCC is of the view that removing regulation in these circumstances could provide increased competitive tension at the wholesale level which would constrain Telstra's ability to price its DTCS services above competitive levels in areas where exemptions are granted. This would result in a more efficient use of existing infrastructure and, where required, efficient investment in new infrastructure..."

² ACCC, *Telstra's domestic transmission capacity service exemption applications*, November 2008 (Final Decision), p 105

"...where there is effective competition or contestability in a transmission market, granting an exemption from the DTCS in that market will not be detrimental to the objective of promotion of competition [and instead] competition and consequently the LTIE will be promoted where regulation is removed through existing optical fibre infrastructure owners..."

"...the existence of actual or potential competitors in the relevant geographic and product market means that it is likely that a particular transmission market is no longer a bottleneck and the removal of regulation in that market may be in the long-term interests of end-users due to the enhanced possibilities for more robust facilities based competition..."

³ ACCC, *Transmission Capacity Service – Review of the declaration for the domestic transmission capacity service*, April 2004 (Final Report), p 27.

⁴ ACCC, *Telstra's domestic transmission capacity service exemption applications*, November 2008 (Final Decision)

⁵ *Ibid*, p5

The removal of competitive routes from regulation is consistent with the views of Frontier Economics in its report accompanying the ACCC's Discussion Paper.⁶ At page 67, Frontier Economics comments, for example:

“Competitive markets would be excluded from pricing regulation. We understand that the ACCC has taken the view that where there are at least three infrastructure-based entrants, markets are likely to be effectively competitive...”

A.3 Updating the appropriate scope of regulation is a necessary first step

Geographic scope

The ACCC currently holds a comprehensive set of data on the extent of competitive infrastructure build within Australia. This data should be used by the ACCC to update the geographic scope of the DTCS declaration, either through an exemption or a service description variation process.

Telstra would encourage the ACCC to use the information it already holds to revise the service description, rather than seek to rely upon parties within the industry to seek individual or class exemptions based upon information gathered elsewhere. Telstra is encouraged by the ACCC's current consultation on the potential publication of Infrastructure RKR data, and believes that a seamless process could be adopted whereby the ACCC rolls back DCTS regulation in the near future, and on a periodic future basis as RKR information is gathered (for example, a list of exempt routes could be published periodically as RKR data is obtained and collated). Telstra believes this is a necessary first step before the ACCC proceeds to resolve any issues regarding the potential pricing of the declared service.

Market developments relevant to T+2 test

Telstra believes it is incumbent upon the ACCC to conduct market enquiries to supplement, and if necessary reconsider and refine the T+2 test, which presently fails to identify all circumstances where regulation should be lifted. For example:

- Operators with dark fibre or long-term rights to transmission capacity should also be counted as competitors, whether or not they are owners of fibre, if they can independently compete. Carriers with long-term rights to transmission capacity should be counted, as in the past, as asset owners by the ACCC;
- The impact of other technologies, such as microwave and copper, upon the market should be examined and reviewed at regular intervals, to assess whether the declared transmission service remains a bottleneck for the supply of services. If it is not, due to the emergence of these technologies and their ability to address all or parts of the market, then

⁶ Frontier Economics, *Economics of Transmission Capacity Services: A Report Prepared for the Australian Competition and Consumer Commission*, June 2009

it is important that regulation be removed so as not to impede upon that competitive dynamic; and

- Should Government-funded competitors, such as NextGen and NBN Co, not be required to provide commercial returns on capital, enabling them to price lower than the market price, this would limit any market power on routes where they operate, reducing or removing the need for price regulation.

B General pricing principles are sufficient to guide commercial negotiations, hence there is no need for any *ex ante* pricing

B.1 No evidence of any failure of commercial negotiations

Pricing of the DTCS has been established successfully through commercial negotiation since declaration of the DTCS in June 1997.

Although Part XIC of the TPA permits access seekers to notify an access dispute to the ACCC where they cannot agree with Telstra on DTCS pricing,⁷ very few access disputes have actually been notified over the past 13 years.

Historically, since the DTCS declaration came into force in June 1997, the ACCC has not had to set a price in any access dispute for the DTCS. There have been just 4 access disputes notified for the DTCS since 1997. These DTCS access disputes were resolved commercially at an early stage in arbitral proceedings, without the need for the ACCC to determine pricing.

The lack of any significant formal disputes illustrates that commercial negotiations have been highly successful in procuring mutually agreeable price outcomes for the DTCS. There is no evidence of any systemic failure of commercial negotiations and hence there is no need for the ACCC to determine *ex ante* prices. Indeed the evidence is to the contrary: contracts for the supply of the DTCS and transmission services more generally are entered into regularly within the industry, across various suppliers, numerous customers and across a broad range of products and substitutes. This further demonstrates the lack of any need for increased regulation of the service, and supports the case for the rollback of regulation to reflect market developments.

B.2 General pricing principles are sufficient

Notwithstanding the growth of competition, if concerns were to arise regarding DTCS pricing, the ACCC already has (and will continue to have) sufficient *ex post* powers to intervene in the resolution of access disputes over DTCS pricing if that is required. An arbitral determination may specify the terms and conditions on which a supplier is to comply with the standard access obligations in respect of the DTCS.⁸ Any arbitral determination would be guided by the ACCC's existing pricing principles for the DTCS.⁹ Accordingly, rather than setting *ex ante* price points, an approach in which the ACCC sets out general pricing principles alone has worked well in the past and remains appropriate.

Similar powers will continue to apply if Part XIC is amended in the manner contemplated by the Government under the Telecommunications Legislation (Competition and Consumer Safeguards) Bill. The ACCC will have the ability to

⁷ *Trade Practices Act 1974* (Cth), s 152CM

⁸ *Trade Practices Act 1974* (Cth), s 152CP

⁹ Under s152AQA, the ACCC must have regard to its pricing principles if it is required to arbitrate an access dispute

determine *ex ante* price points or general pricing principles. Under the proposed amendments, the ACCC may make an access determination or vary an existing access determination at any time. An access determination (or variation of it) may specify price points or pricing principles for the DTCS and may require Telstra (or any other carrier) to supply the DTCS on such terms.¹⁰ The ACCC could continue to apply general pricing principles and have the option to use its new powers of *ex post* direction to resolve any issues relating to DTCS pricing as and when the need arises.

In this manner, even if pricing concerns were to arise under the new regime, the ACCC will still have ample powers to address such issues by regulatory intervention on an *ex post* basis. There is no need for *ex ante* pricing, given the risks that would arise of such pricing distorting the current marketplace. Rather general pricing principles remain sufficient.

B.3 Vigorous competition already exists on many routes, and is intensifying

Vigorous and growing competition already constrains transmission pricing on most transmission routes, consistent with Frontier Economics' recommendation of a 'multi-layered' regulatory approach in its expert report.¹¹

Even on those routes where Telstra is the only provider of transmission services over fibre, Telstra faces threats of:

- competing non-fibre technologies and other data transport technologies;
- potential competition, including via the NBN Co rollout;
- customer self-build, as a form of countervailing market power by wholesale customers; and
- potential *ex post* regulatory intervention by the ACCC.

The growth of competition over the past decade has led to noticeable price declines for transmission services. According to OECD statistics, prices for 2 Mbps in Australia fell by around 30% between 2000 and 2008.¹²

New entry and competition will only intensify in the marketplace given the Government's decision to overbuild in regional areas via the Regional Backhaul Blackspots program, the establishment of TasNBN Co and the potential for NBN Co to be a significant supplier of transmission capacity in future. There is no evidence of any market failure that warrants *ex ante* price regulation.

Indeed, a likely reason for the lack of formal disputes around DTCS pricing is that Telstra's bargaining power in price negotiations is constrained by:

- actual and potential competition by numerous suppliers using various technologies within the market for DTCS transmission services; and

¹⁰ Proposed s152BC

¹¹ Frontier Economics, *Economics of Transmission Capacity Services: A Report Prepared for the Australian Competition and Consumer Commission*, June 2009

¹² Prices for the OECD's 2Mbps leased line basket in Australia in August 2000 and August 2008 (in USD PPP), taken from the 2001 and 2009 editions of the biennial *Communications Outlook* (OECD, Paris).

- the countervailing power of wholesale customers (who may build their own transmission or purchase services from others who are prepared to build with a ready customer base).

With respect to fibre competition, the ACCC has previously noted that a large number of CBD and metropolitan exchange service areas (**ESAs**) are already reached by at least three fibre providers. In November 2008, the ACCC granted an exemption in respect of the DTCS on a large number of routes served by at least three fibre-based operators. The exempted routes included:

- 9 capital-regional routes;
- inter-exchange routes connecting all but one of the 17 CBD ESAs; and
- inter-exchange routes connecting any two of the 72 metropolitan ESAs deemed competitive by the ACCC (as set out in Table 1 below).

Table 1: Metropolitan ESAs deemed competitive by the ACCC in November 2008

State	Metropolitan ESAs deemed to be competitive
NSW	ASHFIELD, BALGOWLAH, BANKSTOWN, BLACKTOWN, BURWOOD, CAMPSIE, CARRAMAR, CASTLE HILL, CHATSWOOD, COOGEE, CREMORNE, EAST, EASTWOOD, EDGECLIFF, EPPING, GLEBE, GRANVILLE, HARBORD, HOMEBUSH, HORNSBY, HURSTVILLE, KENSINGTON, KINGSGROVE, KOGARAH, LAKEMBA, LANE COVE, LIDCOMBE, LIVERPOOL, MASCOT, MOSMAN, NEWTOWN, NORTH PARRAMATTA, NORTH RYDE, NORTH SYDNEY, PARRAMATTA, PENDLE HILL, PENNANT HILLS, PETERSHAM, RANDWICK, REDFERN, REVESBY, ROCKDALE, RYDALMERE, RYDE, SEVEN HILLS, SILVERWATER, ST LEONARDS, UNDERCLIFFE, WAVERLEY
VIC	ASCOT, BRUNSWICK, CAULFIELD, COBURG, ELSTERNWICK, FOOTSCRAY, HEIDELBERG, MALVERN, MORELAND, NORTH MELBOURNE, PORT MELBOURNE, PRESTON, RICHMOND, SOUTH MELBOURNE, ST KILDA, TOORAK
QLD	PADDINGTON, SOUTH BRISBANE, TOOWONG, VALLEY, WOOLLOONGABBA
WA	SOUTH PERTH, SUBIACO

Source: ACCC, *Telstra's domestic transmission capacity service exemption applications: Final decision*, November 2008, p68

However, the set of exemption routes deemed competitive by the ACCC in its 2008 decision is currently only a sub-set of those that would now be treated as competitive under the T+2 test. This is for a number of reasons:

- Due to limited data availability, Telstra only applied for exemption on a limited number of routes, predominantly those in metropolitan Sydney.
- Competition from fibre owners is likely to have further intensified.
- Telstra also faces competition from alternative (non-fibre) infrastructure owners, particularly microwave operators, and increasingly, competition

and potential competition from government-funded entities. The T+2 test does not take these other factors into account in assessing the level of competition.

Telstra continues to experience market share loss to both other fibre operators and providers of transmission services using alternative technologies. Indeed, much of the backhaul transmission infrastructure of other mobile operators is supplied by backhaul transmission providers other than Telstra, including by microwave providers.

Telstra also faces the real threat of its wholesale customers deploying their own infrastructure if they consider that Telstra's pricing exceeds a level that is a reasonable return on investment if carriers where they could deploy their own infrastructure.

Besides existing competitors, Telstra also faces constraints from potential competitors. In his expert report submitted in support of Telstra's 2007 exemption applications, Mike Smart noted that barriers to new facilities-based entry appear to be surmountable on many transmission routes.¹³ Mr Smart's report contains a comprehensive analysis of the level of competition in transmission markets as at December 2007.¹⁴

B.4 The potential for the substantial rollout through Government initiatives means competition in transmission will continue to grow

Competition in the provision of transmission services is only likely to intensify with the rollout of the NBN and the additional traffic this will generate. As local access bandwidth grows, so will the demand for backhaul, creating incentives and opportunities for facilities-based entry and market growth.

Furthermore, NBN Co itself may compete in the provision of backhaul in some areas, creating additional competitive pressure - possibly at artificially low prices. As the ACCC will be aware, the NBN Implementation Study recommended significant overbuild in certain circumstances, and modelled a scenario assuming extensive overbuild, indicating that such overbuild could occur even in circumstances where it is "*not expected to provide a commercial return*". The Regional Backhaul Blackspots program will also generate competitive pressures, aided by subsidised entry.

¹³ Statement of Michael Smart of CRA International on the economic considerations for Metro and CBD domestic transmission capacity service exemptions', December 2007

¹⁴ Statement of Michael Smart of CRA International on the economic considerations for Metro and CBD domestic transmission capacity service exemptions', December 2007, Chapter 5

C Determination of ex ante DTCS price points is highly complex and subject to significant uncertainty, leading to a material risk of unintended market distortions

C.1 Determination of ex ante DTCS pricing would be contrary to the LTIE

Telstra submits that the introduction of ex-ante price regulation for the DTCS would be inefficient, and therefore contrary to the LTIE.

In the case of competitive routes, competition represents a superior tool for price discipline. As recognised by Frontier Economics in its report, there is no case for *ex-ante* price regulation on competitive routes, rather such routes should be exempt (ie removed) from any price regulation.

Where the ACCC has formed the view, either explicitly or implicitly, that competition is not yet sufficient to warrant the removal of declaration, the ACCC should set pricing principles which continue to allow investment and the development of further competition, and should avoid the risks inherent in a pricing intervention.

Telstra submits that the ACCC need go no further than articulating pricing principles, and ought not at this point set *ex ante* prices. In this regard, it is instructive to refer to recent regulatory trends in a related industry—natural gas pipelines where *ex ante* price regulation was rejected:

- The recently introduced National Gas Law, which received assent in South Australia on 26 June 2008, and in all other states and territories subsequently, introduced a new regulatory option: “Light Regulation”.¹⁵
- For those pipelines that successfully apply for Light Regulation status, a form of *ex-post* regulation has been substituted for the *ex-ante* regulation that was previously mandated for all covered (ie declared) pipelines under the Gas Code.¹⁶ Light Regulation, involving a negotiate-arbitrate system, is analogous to the *ex-post* form of price determination currently in place for declared the DTCS – a form of regulation which has been effective for the DTCS for the last 13 years.
- In determining whether a particular pipeline should be granted Light Regulation status, the National Competition Council (NCC) must consider whether Light Regulation would be as effective as Full Regulation (*ex-ante* price determination), and whether the move to Light Regulation would reduce costs to society.¹⁷ If these conditions are met, then the NCC may grant Light Regulation status.

¹⁵ Part 2 of Chapter 3 of the National Gas Law deals with light regulation of pipeline services. The National Gas Law is a schedule to the National Gas (South Australia) Act 2008

¹⁶ National Gas Rules, Part 7

¹⁷ National Gas Law, s122

- Since the passage of the relevant legislation, Light Regulation status has been granted to the Moomba-Sydney Pipeline¹⁸, the Central West Pipeline in NSW¹⁹ and most recently, the Kalgoorlie-Kambalda Pipeline in Western Australia.²⁰ Importantly, the fact that each of these pipelines was judged to hold market power was not an impediment to the granting of Light Regulation status.

The risks involved in *ex-ante* regulation of DTCS can be understood by exploring the motivations for the shift to *ex-post* regulation of gas transmission pipelines.²¹

Ex-ante price determination is cumbersome, time consuming, and expensive. It involves high fixed costs for both the regulator and regulated firms, but potentially lower variable costs. In contrast, *ex-post* price determination involves minimal fixed costs, but potentially higher variable costs in the form of possible arbitrations. Pricing outcomes should be the same under *ex-ante* or *ex-post* regulation because the same pricing principles and input data are applied by the same decision-makers.

Given these facts, the social cost benefit analysis turns on the trade-off between the mainly fixed costs of *ex-ante* regulation and the mainly variable costs of *ex-post* regulation. If the extent of arbitration is significant, then the least cost social outcome would tend towards *ex-ante* regulation. However, if the extent of arbitration is small or negligible, then the cost minimising approach would be *ex-post* regulation.

Ex post regulation ensures that regulatory effort is targeted at those instances where the customer considers regulatory intervention is likely to reach a different conclusion to commercial processes. This is an important feature for the DTCS which is provided under many different conditions throughout the nation.

In conclusion, the current trend toward *ex-post* regulation in the gas transmission pipeline sector provides compelling reasoning that is highly relevant to the ACCC's consideration of possible *ex-ante* regulation of DTCS. Applying the logic that motivated this trend in the gas pipeline arena, DTCS should remain under *ex-post* regulation for two reasons:

¹⁸ National Competition Council, *Application for a Light Regulation Determination in respect of the covered portion of the Moomba to Sydney Natural Gas Pipeline System: Final Determination and Statement of Reasons*, 19 November 2008

¹⁹ National Competition Council, *Application for a Light Regulation Determination in respect of the Central West Pipeline: Final Determination and Statement of Reasons*, 19 January 2010

²⁰ National Competition Council, *Application for a Light Regulation Determination in respect of the Kalgoorlie Kambalda Pipeline: Final Determination and Statement of Reasons*, 29 June 2010

²¹ Some of these issues are explored in the NCC guide to light regulation determinations (National Competition Council, *A guide to the function and powers of the National Competition Council under the National Gas Law: Part C – Light regulation of covered pipeline services*, February 2010, pp13-14). The NCC notes that the light regulation regime was introduced in response to a number of reviews, including by the Productivity Commission and the Ministerial Council on Energy.

- First, the history of arbitration over transmission prices demonstrates that ex-post regulation would impose a lesser cost burden on all participants than ex-ante regulation, while delivering price outcomes that are substantially the same; and
- Second, the risk of regulatory error in price setting is significant. In particular, prices that are set too low will stifle investment incentives and thus limit the extent of facilities-based competition – this risk is particularly acute at the moment given recent market developments and the increasing level of competition that is being experienced.

C.2 DTCS is a complex service with a myriad of commercially-evolved price points

Support for the issuing of general pricing principles only, rather than the determination of *ex-ante* pricing, is further found in the complex nature of transmission pricing. If the ACCC intends to impose DTCS price regulation, it would need to ensure that it appropriately accounts for all relevant factors affecting transmission costs and current pricing structures. Failure to properly account for these factors may lead to prices which distort market outcomes and lead to inefficient use of and investment in infrastructure.

The pricing of transmission services has evolved over time and reflects a range of competing factors. To highlight the complexity of transmission pricing, Telstra currently has some 1660 price points in the price list for the transmission services (in contrast, there is only a need for 1 regulated price for LCS, 2 for WLR and 3 for the ULLS). If the ACCC were to intervene, there is a risk of deterring investment, appropriating legitimate returns from past investment, and distorting decision-making. This would impose unnecessary uncertainty in a market in which pricing is adjusted to meet customer demand and reflect the context of the broader commercial relationship in which the service is provided.

Depending on a wholesale customer's network architecture or the distribution and requirements of their customer base, pricing structures may be customised specifically to meet their needs. Telstra has negotiated unique pricing arrangements with a range of different wholesale customers that reflect their individual requirements and commercial arrangements.

The remainder of this section discusses some of the factors influencing transmission costs and pricing, which should be taken into account when attempting to determine pricing principles for the service, and which also counter the need to determine *ex-ante* pricing.

(a) Ring structure of transmission networks

The complexity of the DTCS is unlike any other declared service due to its geographic topology of interlocking fibre rings and the resulting passage of traffic over multiple dynamic traffic paths. Telstra also deploys point to point links that run from the rings. The resultant cost structure of transmission services is significantly more complex than other declared services such as the ULLS or PSTN OTA, and this translates into a pricing structure which is also highly complex.

In its Discussion Paper the ACCC referred to the unique structure of transmission networks and noted that this “*will have particular significance in any modelling exercise*”.²²

Telstra also agrees with the ACCC’s preliminary view, stated in the Discussion Paper, that:²³

“...efficient pricing of transmission services must provide for a resilient network structure including the availability of redundant paths, particularly on regional backhaul routes...”

Telstra notes however that reflecting the efficient costs of a resilient network structure in regulated transmission prices is likely to be complex, particularly given the need for allocation of costs among a range of different transmission services that may all use a single ring. The main difficulty with the ring topology is the issue of how to allocate the cost of a relevant transmission ring between all of the various specific transmission services that traverse that ring.

This issue was highlighted in the Gibson Quai-AAS transmission cost model that was released by the ACCC in April 2008. This model inaccurately allocated the same costs to different points on a ring and implicitly assumed that every route on the ring contributed the same amount to the cost of the network irrespective of the characteristics of the route, and regardless of whether the routes were different distances, and irrespective of whether the service supplied is protected or unprotected. Under this model, short routes would have been costed too low (resulting in inefficiently high usage), while the costs for long routes would not have been recovered. Telstra has already noted its many concerns with this cost model²⁴ and continues to hold these concerns.

This criticism of the Gibson Quai-AAS model was also made by Frontier Economics in its peer review of the model.²⁵ Frontier Economics noted that for an unprotected service on a ring that goes through Perth, Karratha, Broome, Darwin and Adelaide (illustrated in figure 1 below), the model would have allocated the same cost for transmission between any two points on the loop, regardless of whether it was over the distance Perth to Darwin or Karratha to Broome because the model failed to consider differences between protected and unprotected services.

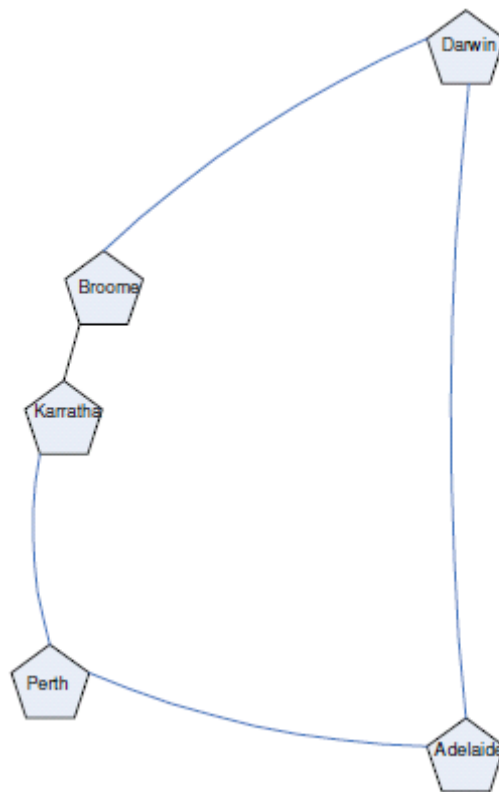
²² ACCC, *Discussion Paper reviewing pricing of the domestic transmission capacity service*, April 2010, p10

²³ ACCC, *Discussion Paper reviewing pricing of the domestic transmission capacity service*, April 2010, p10

²⁴ See Telstra, *Transmission Cost Model: Telstra Submission on Final Model*, dated July 2008.

²⁵ Frontier Economics, *Peer review of GQ-AAS model of transmission capacity services: A report prepared for the ACCC*, August 2007, p4

Figure 1: Illustrative ring structure



Clearly any approach to regulating transmission prices would need to incorporate a means of appropriately allocating ring costs among the various services using that ring.

(b) Factors affecting transmission costs

Transmission pricing is a function of many drivers. While the ACCC identifies some of these cost and price drivers in its Discussion Paper, the ACCC's list is by no means complete.

Some of the most important factors accounting for differences in transmission costs include:

- the distance and terrain over which transmission is provided;
- the amount of bandwidth offered;
- geographic location;
- the extent and cost of ongoing operations and maintenance;
- the utilisation of transmission infrastructure, with lower utilisation leading to higher unit costs; and
- the underlying technology used.

Any approach to regulated pricing will need to take account of all these factors. To the extent possible, the structure of prices should reflect the variability in these factors across different transmission routes.

Telstra notes the recommendation of the Frontier Economics report that pricing for transmission services should reflect the key cost drivers, which it considers to be distance and bandwidth.²⁶ Telstra agrees with this general principle, but notes that a number of other factors (besides those referred to by Frontier) will also affect costs and should also be reflected in the structure of prices. Other relevant factors that influence prices include volume, term, bundling and whole of business contracting.

(c) *Multiple services and delivery technologies comprise the DTCS*

The DTCS is not a homogenous service that is confined to a particular infrastructure type. Rather, the DTCS can be supplied in a variety of forms over a variety of technologies.

The DTCS declaration in its current form already covers a wide range of transmission services with different underlying technologies and varying capabilities. If the ACCC varies the service description to include services with an Ethernet interface (a variation that Telstra does not agree with), the range of services covered by the DTCS would expand even further to cover both the underlying SDH/PDH technology and value-added Ethernet services.

Many carriers productise transmission into separate services for each type of technology deployed, distinguishing their copper based transmission services from their fibre and Ethernet based transmission services. Each of the technologies used to supply the DTCS such as submarine cable, radio microwave, dense wave division multiplexing, copper, fibre and potentially Ethernet have different cost structures.

In addition, many of the products within the DTCS are potentially substitutable for products outside the DTCS. Any form of price regulation which fails to recognise the potential for cross product substitution may distort market decision-making.

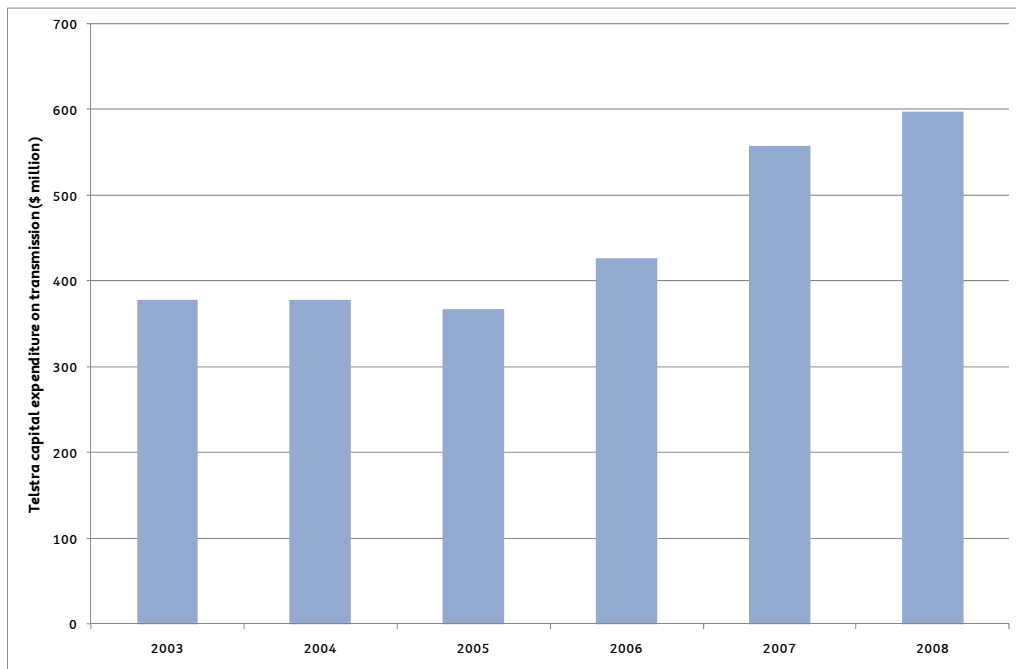
A pricing “straitjacket” that does not take account of differences in cost would create arbitrage opportunities that favour some products over others. Therefore any DTCS price regulation would need to be carefully designed to avoid this risk.

C.3 DTCS investment is sensitive to DTCS pricing

Investment in transmission infrastructure is critical, given the likely future growth in bandwidth demand. Telstra and other carriers have been investing heavily to meet growing demand, and this trend will need to continue in order to meet anticipated future requirements. Telstra’s investment in transmission infrastructure has grown significantly over the past decade (Figure 2).

²⁶ Frontier Economics, *Economics of Transmission Capacity Services: A Report Prepared for the Australian Competition and Consumer Commission*, June 2009, pp33-34

Figure 2: Telstra capital expenditure on transmission infrastructure (\$m, financial years ending 30 June)



Source: Telstra Annual Reports

Investment has been necessary to meet ever-growing bandwidth demand. The International Telecommunications Union (ITU) estimates that between 2002 and 2007, Australia’s international internet bandwidth usage grew at a compound annual rate of around 60%.²⁷ Australia’s usage grew at a faster rate than many other developed nations, including the US and the UK (Table 2).

Table 2: Growth in international bandwidth

Country	Compound annual growth in international bandwidth	Period
Australia	61.5%	2002-2007
United States	48.0%	2003-2008
Canada	32.6%	2003-2008
France	73.6%	2003-2008
United Kingdom	45.8%	2003-2008
Italy	50.3%	2003-2008
Netherlands	49.9%	2003-2008

Source: ITU, *Information Society Statistical Profiles 2009*

²⁷ ITU, *Information Society Statistical Profiles 2009: Asia and the Pacific*, p51

Taking a more interventionist approach to DTCS regulation at this time would risk discouraging critical future investment in transmission infrastructure, including potentially retarding Australia's adoption of new and more efficient transmission technologies. The ACCC should maintain its light handed approach to DTCS regulation in order to maintain incentives for future competitive investment.

If DTCS pricing were incorrectly set, including if prices were lowered below a level sufficient to provide commercial returns, the value of past investments would be appropriated, and incentives for future competitive investment in backhaul transmission would be retarded.

Failure to take into account any of the above factors influencing transmission costs and pricing structure is likely to result in price outcomes that are not in the LTIE.

The ACCC should be wary of intervening in a manner which reduces the likelihood of competitive rollout by preventing transmission providers from achieving a reasonable return on any new investments, especially given that government subsidised entry already exists (eg Regional Backhaul Blackspots).

Consistent with the overall object of Part XIC of the TPA, any determination of pricing principles or indicative prices for a declared service must promote the LTIE. In the case of the DTCS, Telstra believes this means that the pricing principles set should be able to take into account the complex nature of the service and the need to encourage investment through ensuring investors receiving a commercial rate of return. Additionally, the pricing principles should encourage the continued expansion of competitive entry by infrastructure providers. The ACCC should be wary of attempting to over-regulate in a market that to date has not needed regulated pricing.

C.4 Product scope of the DTCS declared service is not yet resolved

The product scope of the DTCS has a material bearing on the appropriate pricing principles to apply to the DTCS as the product scope, in turn, determines the extent of competition in the relevant product markets. Accordingly, it seems premature for the ACCC to revisit the pricing principles for the DTCS in circumstances where the ACCC has not yet crystallised the outcome of its Ethernet variation inquiry. Alternatively, the ACCC should have a further round of public consultation on these issues once the outcome of the Ethernet variation inquiry has been determined.

Specifically, before pricing principles can be determined for a declared service such as the DTCS, the service definition must first be understood by the industry. Determination of pricing principles requires knowledge of what is being regulated, the costs of the supplying service and the most appropriate price structure. Without a clear service definition, these prerequisites cannot be satisfied.

The product scope of the DTCS is currently under review by the ACCC. On 27 November 2009 the ACCC commenced a public inquiry into a variation of the service description for the DTCS. The purpose of this inquiry was to determine whether it would be in the LTIE for the DTCS service description to cover all

commonly used interface protocols on transmission networks in Australia including the PDH (Plesiochronous Digital Hierarchy), SDH (Synchronous Digital Hierarchy) and Ethernet interface protocols. The ACCC is yet to make a decision on whether to vary the service description as proposed.

Variation of the DTCS service description to include Ethernet interface protocols would be a significant change to the scope of the DTCS declaration, and it is one which Telstra believes is unnecessary and inappropriate. It would also add complexity to any cost analysis for the DTCS.

Given the implications of the service description inquiry for the scope of the DTCS, it is premature for the ACCC to finalise DTCS pricing principles at this time. There is substantial uncertainty around the future scope of the DTCS and it is therefore impossible to make informed judgements as to appropriate pricing principles, cost methodologies or pricing structures.

The ACCC should wait until the service description is finalised before proceeding to finalise its views on the appropriate pricing principles. Once the service description inquiry has been finalised, Telstra suggests the ACCC should have a further round of public consultation on pricing principles before its views are finalised.

C.5 Other critical issues are not yet resolved

Besides the DTCS service description, there is further uncertainty around a number of factors relevant to DTCS pricing. These uncertainties should be taken into account when the ACCC sets pricing principles, to ensure those principles are flexible enough to take into account the changes that are likely to occur.

Two important factors that are likely to have a material bearing on any approach to the DTCS pricing principles are:

- **RAB methodology:** The ACCC is currently considering a change to its pricing principles for CAN services, including the ULLS. The ACCC may potentially abandon TSLRIC and shift to an energy-style RAB building block framework for CAN services.
- **Government funded entrants (eg Backhaul Blackspots program):** NextGen is, with government funding, providing backhaul in regional Australia. NextGen is planning to open up the Geraldton, Victor Harbor, and South West Gippsland routes in March 2011, followed by the Darwin and Broken Hill routes in September 2011.²⁸ Because entry is subsidised, the prices offered may be below what a commercial organisation would need to charge (all other things being equal). Telstra can have no market power on routes where entrants are able to price on a non-economic basis, as it might not have the ability to sustain commercial prices in such circumstances.

²⁸ Nextgen Networks (Nextgen) was selected to build, operate and maintain around 6,000 kilometres of new fibre network assets as part of the regional backhaul blackspots program. Construction activities commenced in February 2010 and all infrastructure links are expected to be complete by September 2011 (http://www.nextgennetworks.com.au/RBBP_FAQ.htm).

Accordingly, Telstra submits that these routes should be exempted from the geographic scope of the declared DTCS. If they are not exempted, the pricing principles issued for DTCS would need to take them into account.

These factors could have significant impacts on the regulatory and competitive landscape. Any DTCS pricing principles determination, if issued in advance of the resolution of these issues, needs to be flexible enough to anticipate them.

D Pricing methodologies

D.1 Summary of Telstra's position on pricing models

If price regulation for the DTCS is to be introduced, a range of possible pricing principles could be invoked. These include, at the broadest level, the following models:

Model	Position
No price regulation	Appropriate for workably competitive routes.
Bottom-up TSLRIC+ cost modelling	Potentially complex and prone to error. Under review in separate ACCC process.
Domestic benchmarking	May provide a useful point of comparison, although care needs to be exercised in how it is implemented.
International benchmarking	Not appropriate. Country differences are too significant and Australia is an outlier.
RAB-DORC or 'building block' approach	Under consideration in separate ACCC process – no outcome yet. Premature to apply.
Top-down cost modelling	Not appropriate. Allocation of costs is too complex and Telstra records are insufficient.

The following section discusses the strengths and weaknesses of these models.

If *ex ante*, rather than *ex post*, price regulation is to be applied, the issues are potentially more complex. Once price levels have been determined, there is a further question of price structure. Such issues as the split between fixed and variable charges, price caps versus revenue caps, frequency and trigger conditions for resets are also important, particularly for their incentive properties. However, the focus in this submission is on pricing principles, not individual prices or price structure, given the early stage of the debate on any *ex-ante* price setting and the need for the ACCC to address other issues before finalising its views on pricing principles.

In light of the uncertainty around the future scope of the DTCS, the growing competitiveness of transmission markets and the apparent deficiencies in all of the available methodologies (noted below), Telstra considers that it would be inappropriate for the ACCC to adopt a particular pricing methodology for the DTCS at this time. Rather, the ACCC should maintain its light-handed approach to DTCS regulation, while subscribing to the general principle that prices should reflect the outcomes of a competitive market.

D.2 TSLRIC+ as a form of bottom-up cost modelling

The key steps in calculating TSLRIC-based prices are as follows:

1. Identify the relevant increment of service that is to be priced.

2. Optimise the asset network needed to produce that service, but respect the following constraints:
 - The location of existing key network features are maintained;
 - Replacement technology choices must reflect the best that is both available and in widespread use;
 - Current and reasonably foreseeable demand levels must be capable of being served reliably by the optimised network; and
 - Where the service in question is most efficiently supplied as a joint product with other services, optimise the network to produce all joint products.
3. Calculate the replacement cost of the optimised asset network.
4. Convert the total replacement cost to an annual cost, based upon an acceptable discount rate (set equal to the regulatory cost of capital), and realistic assumptions about asset lives.
5. Unitise the annual cost. This step, which converts an annual cost for a network to a price per unit of service, involves several complexities:
 - Where the network was optimised to supply joint products, the annuity must be allocated between them. A range of possible allocation methods is available. Only the part that is allocated to the service in question should be included in its price;
 - It is often controversial whether unitisation should be based on (current or expected) usage or system capacity. The latter will produce a lower price, since capacity is never less than usage, but may lead the service provider to fail to recover efficient costs;
 - Unitisation may take account not only of current units of service but also future units. In the latter case, care must be taken to ensure that the unitisation step is consistent with assumptions made in the annuitisation step. Unitisation is difficult when there are multiple units of demand (eg SIOs, bandwidth and distance).

Given the global regulatory experience with the TSLRIC methodology, and its position over more than a decade as the preferred methodology of the ACCC²⁹, it may be seen as the natural choice for adopting as a pricing principle for the DTCS.

Two issues, however, should be acknowledged:

- First, in the specific context of DTCS, a difficulty arises because there is currently no widely accepted TSLRIC model for transmission services.

²⁹ See ACCC, Pricing Principles – Telecommunications, 1997.

The ACCC-commissioned Gibson-Quai AAS transmission cost model (“**GQ-AAS model**”) was designed to assist with arbitration of disputes on a route-by-route basis. The specific structure and inputs to the GQ-AAS model have been criticised by various industry players and the ACCC’s consultants Frontier—particularly because of its capacity-based approach to unitisation, which tends to prevent recovery of efficient costs. Telstra’s concerns with the GQ-AAS model have also been raised with the ACCC.³⁰ The ACCC notes that the current GQ-AAS model could not perform the task of simultaneously setting prices upfront for all transmission routes. Telstra continues to have grave concerns regarding the accuracy and validity of the outcomes of any pricing derived from the GQ-AAS model.

- Second, the development of an accurate and fit-for-purpose TSLRIC+ cost model is likely to be time-consuming and prone to error. Given the broad scope of the DTCS, the range of different operators supplying transmission, and the differences in cost structures between routes, it may not be possible to develop a TSLRIC+ model that would deliver DTCS pricing outcomes which promote the LTIE.
- Finally, some doubts appear to be emerging as to the usefulness of TSLRIC+ price levels for some types of communications services, and the ACCC is presently conducting a review in which it is also considering a RAB approach.

D.3 Application of a RAB-DORC methodology would be premature at this time

Telstra notes that the ACCC’s pricing principles for declared fixed line services are currently under review. The ACCC has indicated that it may shift to a building block “RAB” model for pricing of these services. If and when this occurs, the appropriateness of the building blocks methodology for DTCS pricing should also be considered. However, as for TSLRIC, no fit-for-purpose cost model currently exists. In a RAB context, the most appropriate methodology would likely be Depreciated Optimised Replacement Cost method (“**DORC**”).

DORC is widely used in regulated industries, including energy and transport sectors, although not generally in telecommunications. Nevertheless, the optimisation step in DORC is analogous to that undertaken in TSLRIC in that the asset is optimised for the particular services that are the focus of interest. As with TSLRIC, an optimised asset value is established, which is then annuitised and ultimately unitised to produce a price.

The principal differences between DORC and TSLRIC are that:

- Each industry tends to develop its own optimising conventions: pipeline and railway systems tend to maintain their existing route geometry and

³⁰ See Telstra, *Transmission Cost Model: Telstra Submission on Final Model*, dated July 2008.

nodal positions with optimisation usually applied only to pipeline diameter and material, or to the number of railway tracks;

- Depreciation since construction is applied to the optimised replacement cost for the relevant asset in order to establish the regulated asset base; and
- Annual capital costs are calculated as the sum of return on (depreciating) assets and a depreciation charge. These tend to differ each year, unlike the credit foncier-type annuity that is calculated in TSLRIC.

Unitisation within DORC is nearly the same as it is in TSLRIC once the annual costs have been established—both apply an average cost methodology with actual or projected usage in the denominator.

In a practical sense, DORC and TSLRIC+ may tend to produce very similar pricing outcomes over the expected life of an asset. They are both designed to produce zero economic profit.

In some ways, DORC is a simpler methodology to apply in practice, and the simplifications inherent in DORC would be valid for point-to-point transmission. On the other hand, the network issues that complicate the task of estimating simultaneous prices for all transmission services (including the ring structure of transmission networks, and the substantial commonality of major nodes and trunk links) would be equally problematic for DORC and TSLRIC+ approaches.

D.4 International benchmarking has serious limitations

Benchmarking represents an empirical attempt to define some universal pricing standard which could be applied to particular instances of local services. In its various econometric forms, it has sometimes proven useful in correcting for cost inefficiency (for example with Total Factor Productivity studies) or monopoly pricing. The utility of benchmarking depends heavily on the ability to overcome potential sources of sample selection bias and omitted variable bias.

International benchmarking can enable the broadest possible range of observations. In a statistical sense, robustness can be achieved by taking into account the entire range of relevant inputs, spanning issues as diverse as cost, institutions, history, demography, culture, market structure and demand conditions.

On the downside, however, international benchmarking faces serious challenges ensuring the comparability of the services whose prices are tested. For example, local calls are untimed in Australia, but timed in most European jurisdictions. How does one compare the price for an untimed service to the per-minute price for a timed one?

Indeed, as both the ACCC and the Australian Competition Tribunal (**ACT**) have previously noted, international benchmarking has very serious limitations in the context of telecommunications pricing. Where differences between countries cannot be appropriately controlled for, pricing based on international benchmarks is likely to diverge significantly from the costs of supply.

In particular, regulators and courts have consistently noted the various pitfalls of international benchmarking. The consistent view is that access price benchmarking should only be used in those cases where underlying differences can be adjusted for, so that the benchmark countries are reasonable comparators.

Cross-national comparisons must adjust for a much greater set of variables than within-country comparisons. Among these variables are exchange rates, population density, market structure, scope and objectives of regulation, expectations of service quality, cost of capital, and technology options. Making appropriate corrections for all of these factors is difficult when detailed observation of conditions in foreign countries is hampered by the difficulty obtaining verifiable data, commercial secrecy, language differences, and the cost of travel.

Where such factors are not controlled for, international benchmarking is likely to be highly misleading and should not be used in determining access prices.

The ACT has expressly considered and identified the various problems with international benchmarking of access prices in a telecommunications context. In its review of Telstra's 2005 ULLS Undertaking, the ACT rejected Telstra's international benchmarking on the basis that various differences between benchmark countries were not properly controlled for. Although Telstra had made adjustments for line density and purchasing power, the ACT found that there were too many other factors potentially affecting the applicability of benchmarking. The ACT commented:³¹

“...in order to place any reliance upon the international benchmarking analysis it would be necessary to know much more about the regulatory framework, the cost of capital and the price structures employed in other jurisdictions...

The costs of providing the ULLS (or similar services) can vary between jurisdictions for a myriad of reasons and we need to be careful when comparing cost estimates across different jurisdictions...”

The ACCC has similarly noted that benchmarking will only be useful where it takes account of the various similarities and differences between countries and attempts to control for these. The ACCC stated in its Final Decision on Telstra's March 2008 ULLS Undertaking that it is important that these differences between countries be identifiable and capable of robust quantification:³²

“...The ACCC notes... the need to take account of similarities and differences between countries in a benchmarking exercise. The ACCC notes that consideration of such factors is relevant to an international benchmarking exercise that produces useful information. The ACCC also considers that of importance is whether a number of these factors can be quantifiable in a robust manner so that useful comparisons can be made...”

³¹ *Re Telstra Corporation Ltd (No 3)* [2007] ACompT 3 at [385]

³² ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking: Final Decision (Public Version)*, April 2009, p77

The Commission has also acknowledged the need to ensure that all factors that drive cost differences be taken into account:³³

“...the Commission is of the view that any analysis that attempts to make adjustments for factors that drive cost differences between international jurisdictions should be conducted comprehensively, or not at all. In other words, in the Commission’s view, it would only be appropriate to adjust estimates of cost from other jurisdictions for Australian-specific factors if all major factors that influence costs in different jurisdictions could be identified and quantified. This is primarily because adjusting cost estimates from other jurisdictions for each of these factors individually will push estimates of the cost of providing MTAS in different directions and by different amounts. Hence, it is unclear in which direction (and by what amount) a MTAS cost estimate would change if it were adjusted for all factors in combination.

For these reasons, the Commission believes that it would be inappropriate to adjust only for a subset of these factors in isolation of other possible adjustment factors as the results may be more misleading than making no adjustments at all...”

Given the range of factors that would need to be adjusted in any international benchmarking exercise and the significant differences between Australia and potential comparator countries, there would appear to be substantial risks with this approach. There are few, if any, countries that are sufficiently comparable to Australia. Australia’s geography and network architecture lead to unique cost structures that are unlike those in other countries.

Indeed, the Frontier Economics report accompanying the ACCC Discussion Paper notes:³⁴

“...benchmarking of charges against services in jurisdictions that offer cost-based prices is inherently problematic given Australia’s geography. It means there are likely to be few comparable countries against which to benchmark prices.”

Further, a June 2010 report by LECG, “*International benchmarking of Australian wholesale transmission capacity*” (**LECG Report**) accompanying this submission includes a more rigorous analysis of the various factors influencing transmission prices and the extent to which these can be controlled for. The LECG Report finds that the 3 most important explanatory variables relevant to international benchmarking for the DTCS are:

- route length;
- bandwidth of service; and
- asset utilisation pertinent to the transmission service.

³³ ACCC, *Optus’ Undertaking with respect to the supply of its Domestic GSM Terminating Access Service (DGTAS) Final Decision*, February 2006, p177

³⁴ Frontier Economics, *Economics of Transmission Capacity Services: A Report Prepared for the Australian Competition and Consumer Commission*, June 2009, p62

The LECG Report finds that when all of these explanatory variables are accounted for, Australian transmission prices (as represented by Telstra yields) are very close to what would be predicted by the international benchmarking model.³⁵ This suggests that if all the key drivers of transmission prices are properly accounted for, current Australian transmission prices would be found to be broadly in line with international benchmarks. The LECG Report notes that this result is consistent with observed strength of competition in Australian transmission markets.³⁶

Notwithstanding this, the LECG Report notes that any international benchmarking exercise will be severely limited by data constraints and an inability to control for unobserved inter-country differences affecting transmission costs and prices.

The LECG Report concludes that in light of the various data constraints, international benchmarking would be inappropriate for the current purpose:³⁷

“... my conclusion is that, despite the usefulness of international benchmarking for a range of purposes, it would be premature to attempt to employ it to set regulated DTCS prices for Australia. Until the issues I have raised above concerning the route-specific measurement of utilisation, the selection of a representative sample set, and the comparability of services can all be confidently addressed, international benchmarking may distort prices away from the long run marginal cost standard...”

Given the risks associated with international benchmarking and the potential for it to be highly misleading as to the costs of supply the DTCS, Telstra submits that it cannot be meaningfully informative in price-setting, and should not be used as a basis for pricing DTCS.

D.5 Australia is an outlier in any international benchmarking due to utilisation issues

One critically important cost driver for transmission services in Australia is utilisation. Given Australia’s relatively small population is dispersed over significant geographic distances (ie low population density), infrastructure utilisation on regional routes is very substantially lower than in other countries, resulting in higher unit costs of transmission.

There are few, if any, countries that are sufficiently comparable with Australia in terms of utilisation of transmission infrastructure. Australia’s unique geography and population distribution means that transmission infrastructure utilisation is significantly lower than other countries. This means that total infrastructure costs are spread over a much smaller usage base, resulting in substantially higher unit costs.

This point is highlighted in the expert report of LECG accompanying this submission. LECG attempts to quantify the differences in utilisation among a

³⁵ LECG Report, p24

³⁶ LECG Report, p24

³⁷ LECG Report, p5

sample of 7 countries, including Australia. LECG’s findings are that Australia has the lowest utilisation of transmission infrastructure, compared to all other sample countries. As shown in Table 3 below, all other countries in the LECG sample have utilisation that is at least 3 times higher than in Australia, and one country (the Netherlands), has utilisation is nearly 20 times higher.

Table 3: Estimates of transmission infrastructure utilisation

Country	Relative utilisation of transmission infrastructure (Australia = 1)
Australia	1.00
Canada	3.07
USA	14.40
UK	14.89
France	9.44
Netherlands	18.43
Italy	3.92

Note: for methodology, refer to the expert report of LECG accompanying this submission.
Source: expert report of Mike Smart of LECG

D.6 Domestic benchmarking can also inform price-setting, provided that benchmarks are sufficiently comparable.

Telstra submits that domestic benchmarking, if properly implemented, may be useful to inform DTCS pricing on sufficiently comparable routes.

Many of the problems with international benchmarking can be avoided by examining only observations taken from within Australia. Domestic benchmarking has a number of attractive features:

- comparability of services is easier to establish;
- fewer adjustments to the raw data are required; and
- the same econometric tools as international benchmarking uses can be applied.

Importantly, fewer adjustments would need to be made for domestic benchmarking as compared to international benchmarking, since only intra-country differences would need to be accounted for.

There remain, however, some issues even for domestic benchmarking of the DTCS:

- First, different firms have different services, and these differences need to be accounted for. One way of accounting for these differences is to undertake a domestic benchmarking analysis for each firm selling transmission services, rather a single benchmarking exercise that tries to factor in differences between firms. This also overcomes some confidentiality issues.

- Second, there is a need to take into account differences between exempt and declared routes that would reasonably result in price differences between these areas (eg utilisation etc). This is likely to be easier than in international benchmarking as more detailed information is available allowing one to take account of such differences.

However, caution must be exercised to ensure compatibility and/or adjustments for differences between cost drivers such as the technology used, route distances, bandwidth supplied or infrastructure utilisation.

Logically, domestic benchmark data will be more likely available on more competitive routes, where more transactions are generated. Regulated routes or routes subject to the NBN SAU (which is anticipated to cover only routes with limited competition) would not be comparable and are not helpful to benchmark as they do not represent a market price, but a price arrived at through a regulatory construct.

D.7 Top-down costing is too arbitrary in its allocation of costs

The ACCC also raises the possibility of top-down costing using Telstra's accounting costs. This approach would be highly dependent on the complex allocation rules used to allocate costs to transmission services generally, and would require additional rules to allocate among the different types of transmission services. Use of Telstra's historic accounts would not be an appropriate basis for pricing and would not be in the LTIE.

Unlike bottom-up modelling, which constructs a total cost from an assortment of cost elements, top-down modelling begins with an estimate of total costs for the service-providing firm. This total is then progressively subdivided through a process of attribution to functions or geographic regions. Costs that are genuinely common to more than one service cannot be attributed in any unique or objectively valid way among these services. At that stage in the subdivision process, allocations must be made that are inherently subjective.

Three common variants of top-down cost modelling are discussed below: historic cost, current cost and fully-distributed cost.

(a) Historic cost

Regulators in some jurisdictions, notably the United States, employ historic cost valuation for assets. This approach seeks to align economic cost more closely with accounting cost, which might not be in the LTIE. Where assets are subject to upward revaluations over time, historic cost accounting ensures that the owner does not receive a windfall gain through revaluation.

On the other hand, where assets experience declining real replacement costs or where operating costs are declining over time due to technological advances, historic cost accounting may permit the owner to lock in prices that are higher than an efficient new entrant might charge to provide an equivalent service with more modern assets.

The ACCC's Regulatory Accounting Framework ("RAF") would form the basis of any top-down cost modelling for transmission. The RAF data set is compiled on both historic cost (HCA) and current cost (CCA) bases. The ACCC discussion

paper notes that a greater level of granularity would be required within the RAF with respect to transmission services to enable useful top-down cost modelling for transmission services. Presently the degree of detail appears to be insufficient to support this use. It is not clear how long it might take to obtain the necessary data, and what practical obstacles might appear.

The ACCC has also previously noted the RAF does not provide clear guidelines as to how costs are to be allocated by reporting carriers. This implies that Telstra's costs may be allocated differently to other carriers' costs in the RAF accounts. The ACCC has noted the data limitations of accounting data in the following terms:³⁸

“While Telstra's Regulatory Accounting Framework (RAF) data is provided in accordance with the reporting requirements set out in the RAF, the relevant Record Keeping Rules (RKR) do not set out in detail how costs relating to a particular service should be allocated. Rather, the RKR provide general principles and 'high level' allocation methods which telecommunications carriers can apply in a number of different ways. The ACCC does not accept or reject a particular carrier's cost allocation method or assess the efficiency of the resulting cost allocation, it merely raises issues where there is non-compliance with the high level principles set out in the RKR. Accordingly, there may be an absence of reliable accounting cost data attributed to particular services on which to base a CCA approach, even if total cost amounts were appropriate.”

If the RAF accounts were to be used, adjustments would also be needed to ensure consistency in the approach to cost allocation by different carriers. Without such adjustments, the RAF accounts would be an inappropriate basis for determining prices.

(b) *Current cost*

An alternative to historic cost valuation is current replacement cost valuation. Current cost accounting ensures that prices are kept in line with the price that an efficient new entrant might charge at any point in time. This choice is consistent with the philosophy of operational capital maintenance because it would ensure that prices are sufficient to replace existing assets at current asset prices.

Current cost accounting is inconsistent, however, with financial capital maintenance. It means that where replacement costs are increasing, the owner may receive a windfall through revaluation. Conversely, when replacement costs are declining (as they often are for telecommunications equipment due to technological improvements) the owner would fail to recover past investments.

As with historic cost accounting, the RAF could be used to perform top-down cost modelling on the current cost basis. The same issues with insufficient granularity in these RAF records apply to current cost accounting.

³⁸ ACCC, *Unconditioned Local Loop Service (ULLS) – Final Pricing Principles*, November 2007, at p10

(c) *Fully-distributed cost*

Fully-distributed cost is perhaps the most common type of top-down cost modelling. It is essentially an accounting approach rather than an economic approach. In theory it differs very little from the historic cost accounting approach discussed above. In practice it differs in that the source data is usually the firm's own accounts, as opposed to regulatory accounts.

A common issue for all of the top-down methods is that while they may be able to calculate revenue levels for transmission as an activity, the data sets on which they rely do not contain the detail that would be required to derive economically efficient prices for individual transmission services. The benchmarking work that was done by LECG (2010) established that distance, bandwidth and asset utilisation are all key drivers of transmission price. These measurements for individual transmission services are simply not available within the data sets for top-down cost modelling.

D.8 Conclusions on pricing methodologies

Telstra submits there is no case for the introduction of more interventionist price regulation of the DTCS. Such a shift in regulatory policy would ignore the history of the declared DTCS and the manner in which access pricing has been set to date within the industry. The continued emergence of other suppliers and new technologies, changes in demand for the service and the recent government entry initiatives all point to this being a time of intensifying competition and regulatory forbearance, rather than more intrusive price regulation.

Telstra submits that the pricing principle for the DTCS should be one that reflects competitive market outcomes. Telstra notes that there are a number of cost methodologies by which this general principle could be implemented. However, each of these approaches has major drawbacks in the context of the DTCS.

Whilst the ACCC has adopted TSLRIC+ in the past, there would appear to be a number of potential problems with this approach in the current context. Due to the complexity and broad scope of the DTCS, there is a significant risk of pricing error (and associated market distortions) with a TSLRIC-based approach to pricing. Moreover, there is currently no widely accepted TSLRIC model for transmission services and building such a model may take some time. Finally, TSLRIC+ is under review in a separate ACCC process, and may be replaced by a RAB approach.

The introduction of *ex-ante* regulation at this point in time would also run counter to recent changes to the regulatory approach for *ex-post* regulation in the gas pipeline market. The logic and recent case law as demonstrated in the gas pipeline industry directly supports the continuation of a more light-handed approach to regulation for the DTCS, not least because of the low incidence of price disputes over the DTCS.

Domestic benchmarking can aid understanding of prices, provided that benchmarks are similar, comparable and/or appropriately adjusted. All of the relevant cost drivers must be incorporated in the benchmark model, and only

competitive routes (not regulated routes) are relevant to be used as benchmarks.

International benchmarking is not appropriate. Asset utilisation has been shown to be important, but many previous transmission benchmarking studies have omitted it. While this omission may not have been serious for some international jurisdictions, it would significantly prejudice the results for Australia where utilisation is particularly low by international standards owing both to Australia's dispersed transmission nodes and small population.

Other options that were canvassed in the ACCC discussion paper and the Frontier Report commissioned by the ACCC appear unsatisfactory. Top-down cost models suffer from the problem that in neither the service providers own accounts, nor the ACCC RAF records is there sufficient detail to obtain meaningful route-specific transmission cost allocations.

In short, transmission capacity in Australia has been characterised by rapidly growing demand, substantial investment and an increasing level of competition, with very little regulatory disputation and, more recently, significant rollback of regulation. The ACCC's assessment of DTCS pricing should look to support and encourage this positive trend by maintaining a light-handed approach to regulation and continuing to roll back regulation where competition is demonstrably effective. Telstra submits that the pricing principle for the DTCS should be one that reflects competitive market outcomes. Whilst there a number of ways in which this general principle may be implemented, each of these approaches has drawbacks in the context of the DTCS. Therefore once this general pricing principle has been established, the ACCC should not proceed beyond this to set price points. Determination of price points would be an unnecessary and highly complex exercise that would run a high risk of significant regulatory error and would not be in the LTIE. The best means of ensuring competitive prices is to continue the roll back of regulation to encourage investment and competitive entry in response to growing market demand.

Attachment 1 Answers to specific questions raised by the ACCC in the Discussion Paper

ACCC Question	Telstra response
Market, Products and Price Structure	
What grade of network do service providers and businesses require?	Customers of transmission services have varying needs, and therefore a mix of network grades are offered to meet these various uses. Carriers can build or buy high grade network services and aggregated services, or they can purchase lower grade services for on-selling to end customers. Different transmission technologies (eg copper, microwave) provide different service qualities at different distances and prices.
Should the ACCC seek to cost and set regulatory prices for the DTCS based on ring structures, point-to-point links or some other network design?	<p>As explained in more detail in this submission (specifically sections B and C), the ACCC should not regulate prices for the DTCS at this time. The design of transmission networks can be very complex and will vary depending on the decisions made by different carriers who invest in the service with different commercial objectives. To regulate prices at a time when the market is more competitive than ever, when there has been no requirement for regulatory intervention to date, and when the market is potentially going to change significantly in the next few years due to the emergence of a possible new provider in the form of NBN Co, introduces a significant level of regulatory risk and the potential to distort the competitive environment.</p> <p>In any event, it is possible for many pricing constructs to meet the LTIE, and much will depend upon the particular service that is being offered by the supplier, the requirements of the customer and the circumstances in which the offer is being made. The complexity of the DTCS means that there is no one-size-fits all approach appropriate for determining prices. For example, setting prices on the basis of a ring structure is unlikely to be appropriate for a carrier who does not supply the DTCS, using that network architecture.</p>
Cost Allocation	
How should the ACCC allocate costs between competitive and non-competitive routes, declared and non-declared routes?	<p>Telstra believes it is premature to discuss the allocation of costs across competitive and non-competitive routes, declared and non-declared routes, and amongst the various uses of the network, given that the ACCC has not yet established the appropriate pricing principles to apply.</p> <p>In any event, the ACCC will need to be guided by the statutory criteria, and in particular, the need to ensure that carriers supplying the DTCS are able to recover costs plus earn a commercial return on their investment. Failure to properly have regard to the costs incurred by carriers in supplying the DTCS will dampen investment, and potentially discourage further entry.</p> <p>Generally speaking, Telstra believes that costs should be allocated on the basis of utilisation to ensure that the full costs of the transmission networks are recoverable.</p>

ACCC Question	Telstra response
How should the ACCC allocate costs that use the same infrastructure for mobile backhaul, fixed services and transmission services?	A proportion of the costs for network assets that are shared by DTCS and non-declared services should be included in any cost analysis of DTCS. The proportion should reflect the extent of sharing and relative utilisation of the network assets.
Is it appropriate for the ACCC to adopt different regulatory pricing methodologies for “tail” segments and “trunk” segments of the transmission network?	Telstra believes that different pricing principles for different components of the transmission service will result in prices which unnecessarily distort market behaviour. Transmission tails are already subject to significant competition from copper lines, copper bonding and microwave as well as competitive fibre build. The same competitive pressures are visible in backhaul markets. Accordingly, Telstra believes that a consistent approach is required when establishing the pricing principles for all elements of the declared DTCS.
What level of spare capacity is available within current transmission network configurations?	The level of spare capacity in the network varies by location, and according to the business requirements of the carrier undertaking the network build. In principle, Telstra seeks to have sufficient capacity to meet medium term forecast requirements and does not overprovision the network with excess spare capacity. Notwithstanding this, network components are manufactured in standard sizes, meaning that installation of fibre can lead to limited unavoidable spare capacity.
How should future capacity be accounted for in network cost calculations?	In assessing the appropriate regulatory approach to pricing the service, it will be important to ensure that it sends the appropriate pricing signals to encourage investment in infrastructure. This implies that carriers must be compensated for the risks of investing in infrastructure where demand is uncertain. Moreover, the costs of the DTCS should include the costs of prudently investing in spare capacity to ensure continuity of current supply (including route redundancy) and the ability to meet reasonably forecasted future demand.

ACCC Question	Telstra response
General Price Methodologies	
General observations	As set out in section B of this submission, Telstra believes that it is unnecessary for the ACCC to consider pricing structures and constructs at this stage. In addition, the complex nature of the DTCS, the different ways in which it can be offered by various providers, and the different demands of customers mean that it is very difficult for a blanket approach to be adopted in the pricing of all DTCS services (refer to section C). Pricing constructs and pricing levels vary within the market and change over time, adapting to changing customer needs, the increasingly competitive environment (where a customer's choice as to the acquisition of different service providers and potentially using different technologies may require a different approach to the pricing offered), and the advancements in technologies. Accordingly, Telstra believes that seeking to determine a "one size fits all" approach to pricing and pricing constructs at this stage is likely to carry with it significant risk of distorting the market and sending incorrect purchasing signals.
Are capacity and distance the critical cost drivers for transmission services?	Bandwidth capacity and distance are two of the key cost drivers for transmission services. Utilisation and geography are also critical cost drivers (refer to section C and the expert report of LECG).
Are fixed connection charges an appropriate method to recover costs?	Fixed connection charges are appropriate mechanisms for cost recovery. Telstra notes that fixed connection charges are a feature of existing commercial pricing arrangements
Are distance based charges appropriate? If so, on what basis should distance charges be calculated (eg actual distance, radial distance or by geographic region)?	Distance based charges are appropriate, since there is a relationship between distance and costs. However, the relationship between distance and costs is typically non-linear and therefore prices will not necessarily increase linearly with distance. Generally speaking, the requirement to recover fixed costs result in shorter distances having a higher per kilometre cost than longer distance routes. Telstra currently accounts for distance in 3 ways. 1) For some routes, distances are built into the charges; 2) For other longer routes radial distance bands are used; and 3) For other shorter routes the charges increase by radial kilometre. Radial distance is used as a means of simplifying the charges. Telstra currently charges an average cost for the distance for the tail component.
Should regulated prices vary between transmission service types (eg tail end and inter-exchange transmission)?	Prices should be set so as to ensure cost recovery, and to allow for a commercial return on the investment made. The tail (terminating) component introduces different additional costs to the IEN (trunk) component. Therefore to charge uniformly for all services (eg to charge for a tail on all services, even if not provided) or to ignore tail costs would not allow for cost recovery, and would therefore not be in the LTIE. This implies that the structure of DTCS prices should allow for separate provision of these different service types.

ACCC Question	Telstra response
Should regulated prices for transmission vary between different regions (eg metropolitan and regional)?	Yes, cost differences between different geographic areas must be taken into account in any pricing approach.
What type of pricing relationship should exist between distance and capacity?	Pricing structures must take into account the impact of both distance and capacity on prices. Although these will often be correlated with each other (eg more capacity may be provisioned on longer routes), the structure of prices should account for each of these factors separately.
Would prices set according to a trunk/terminating segment approach be more appropriate?	As noted above, the structure of DTCS prices should allow for separate provision of these different service types
Pricing Structure	
General observations	As mentioned above, the structure and level of prices charged for the DTCS may change over time depending on market developments, and in response to competition (current and emerging). It is not possible to definitely state at this stage that a particular pricing construct suits all DTCS pricing in all circumstances. Telstra remains concerned that the DTCS is not a simple service to price, and therefore it is not a service where a “one size fits all” approach will necessarily be suitable for all services (refer to section C of this submission for further discussion). Nevertheless, Telstra provides the general answers below to the questions raised by the ACCC:
What are the main types of transmission charges (eg are there connection / disconnection charges, special charges, monthly charges or annual charges)?	The main charge is the monthly rental charge. There are also connection charges which apply on a one-off basis. A number of other charges may apply for various options that may be purchased around the standard service. For instance special linkage charges may apply for additional capital works such as in-building wiring services.
Are transmission products typically purchased as specific point-to-point links or as part of a bundle? If the latter, then what products are typically included in the bundle(s)?	Transmission services are sold under a range of commercial constructs, from individual standalone services to the DTCS being one product within a group of different services. Generally speaking, the tail service is sold as a bundle with the backhaul, although this does not always occur.
Do transmission prices vary according to capacity, distance, some other factors (please specify), or a combination (please specify) of different factors? If so, how?	Factors that are relevant to pricing include bandwidth capacity, distance, geography and the type of service being provided (ie tail versus terminating).

ACCC Question	Telstra response
Does transmission pricing differ among geographic categories (ie inter-capital, 'other', inter-exchange local and tail-end transmission)?	Pricing does differ by geography for several reasons, including the different costs arising from different installation technologies which may be better suited to different terrains.
Are the pricing structures for declared and non-declared routes different? If so, then what are the differences?	It is unnecessary for the ACCC to consider pricing structures and constructs at this stage. Pricing constructs and pricing levels vary within the market and change over time, adapting to changing customer needs, the increasingly competitive environment (where a customer's choice as to the acquisition of different service providers and potentially using different technologies may require a different approach to the pricing offered), and the advancements in technologies.
Are there volume discounts based on the number of links purchased, capacity, distance, or other factors (please specify)? Are there term discounts based on contract length?	The commercial considerations that are relevant to a negotiation vary case by case. Volume and term discounts are relevant to the pricing of the service that is offered by suppliers in the commercial context.
Where a supplier other than Telstra is present, are commercially negotiated transmission charges substantially different for an equivalent or comparable service?	Telstra cannot comment on the prices of other DTCS suppliers.
If you are an access seeker, how important is the availability of redundancy in choosing a supplier for transmission services where two or more suppliers are present?	Telstra cannot comment on purchasing capacity from other suppliers.
If you are an access seeker who purchases/purchased transmission products from a supplier other than Telstra, is/was redundancy automatically included? If not, and you purchase / purchased redundancy?	Telstra cannot comment on purchasing capacity from other suppliers.

ACCC Question	Telstra response
Price Methodologies: Bottom-up long run incremental cost	
<p>Is it appropriate to model a ring structure that provides for high levels of resilience or point-to-point links that better reflect how competitive entry has so far developed?</p>	<p>Both ring and point to point network design structures are integral to an efficiently designed and resilient network. It is critical that transmission charges allow for recovery of transmission network costs plus a commercial return on the investment. The full costs experienced in building a network across a country the size of Australia and in ensuring a level of quality that will secure resilient supply are relevant. Any pricing approach needs to take into account the quality of the service that is offered and ensure that differences in quality are acknowledged and reflected in the ultimate price determined. Pricing of a transmission service which provides for redundancy should not be reduced to that of a competitive service offered which provides no such assurance. Similarly, if a supplier offers a lower grade of quality (ie no redundancy), then the regulated price for that service should not be set on the basis that redundancy is provided.</p>
<p>What is the appropriate level of aggregation that would most accurately reflect costs? For example, the existing classification could be maintained, or horizontally aggregated into 'trunk' and 'terminating'. Alternatively, services could be disaggregated into geographic bands and/or into different service capacities (e.g. bandwidths).</p>	<p>Given the range of different services comprising the DTCS (refer to section C.2), there is no one-size-fits-all level of aggregation which would be appropriate for all services.</p>
<p>What is the appropriate network size to model? For example, would a state be representative or would a more extensive model be necessary in order to increase the reliability of the costing?</p>	<p>The entire transmission network capacity of all DTCS providers would need to be modelled. It would not be sufficient to just concentrate on one part of the network (eg a single state, or capacity of a single provider) as this may not be representative of costs and volumes in other areas.</p>
<p>Would a TSLRIC+ model of this nature best promote 'build' or 'buy' signals across the entire DTCS network or is it better suited to particular categories of transmission?</p>	<p>One set of pricing principles should apply to the full set of transmission services. The distinction that the ACCC makes in promoting build for IEN and promoting buy for tail transmission services is artificial. A market inquiry would reveal that tail services are far more competitive than the ACCC has assumed to date, and that there is no need for the ACCC to set prices for tail services given the availability of other substitutes (including copper tails (ULLS), copper bonding, and microwave), and the high level of commercial agreement within the industry in relation to current pricing as well as the forthcoming overbuild by NBN Co.</p>

ACCC Question	Telstra response
Is a price formula based on a linear relationship between price and transmission rates appropriate? Or should prices exhibit a diminishing relationship to increasing transmission rates?	It cannot be assumed that the relationship between transmission rates and costs will be linear. A significant portion of costs will be independent of the transmission rate. Telstra believes that a diminishing relationship between price and distance and bandwidth is generally appropriate.
How appropriate is this methodology for promoting the objectives of both the current and proposed regulatory regimes?	Current and proposed regulatory regimes both have the same statutory requirement, which is to satisfy the LTIE. It is appropriate in both instances for the ACCC to set pricing principles for the service. There is no requirement (either legislative or in terms of industry demand) for the ACCC to determine regulated prices in either the current or proposed regimes. Indeed to do so would create a risk of significant regulatory error in a market which is increasingly competitive, and is on the verge of having a potential new supplier enter the market (refer to section B of this submission for further discussion).
Price methodologies: Top down long run incremental cost	
Is a top-down long-run incremental cost approach based on improved RAF reports appropriate for deriving prices for the DTCS?	As demonstrated in section D.7 of this submission, top down methodologies are inappropriate due to the high degree of aggregation in the RAF and internal account reporting compared to what is required to develop suitable market prices for the relatively complex transmission services. In addition, the RAF does not apply to all providers of transmission services, and therefore would either need to be extended to the other suppliers of the service, or would need significant adjustment in order to be a relevant basis for determining the price of services offered by those parties.
What is a realistic timeframe for access providers to implement major changes (such as those envisaged above) to their reporting obligations under the RAF RKR?	For the reasons above and in section D.7 of this submission, Telstra does not consider a top-down approach to be appropriate.
Would it be useful to enhance pricing generated by a bottom-up long-run incremental cost model with other costing data, for example, disaggregated service usage and other data obtained from an extended RAF?	For the reasons above and in section D.7 of this submission, Telstra does not consider a top-down approach to be appropriate.

ACCC Question	Telstra response
Fully Allocated Costs	
Is a FAC approach based on improved RAF reports appropriate for deriving prices for the DTCS?	Telstra does not believe that a FAC approach is an appropriate methodology for pricing the DTCS for the reasons above, and as detailed in section D.7 this submission. In addition, as mentioned above, any proposal to use the RAF would require an examination of the current suppliers in the industry, and the introduction of a RAF for those suppliers, as well as adjustments to the existing RAF reports for other suppliers.
Should price caps or other kinds of incentive regulation be set in conjunction with a FAC pricing approach?	Telstra does not believe that a FAC approach is an appropriate methodology for pricing the DTCS for the reasons above, and as detailed in section D.7 this submission.
What is a realistic timeframe for access providers to implement major changes (such as those envisaged above) to their reporting obligations under the RAF RKR?	Telstra does not believe that a FAC approach is an appropriate methodology for pricing the DTCS for the reasons above, and as detailed in section D.7 this submission.
International & Domestic Benchmarking	
Are international and domestic benchmarks an appropriate tool for deriving prices for the DTCS?	For the reasons set out in sections D.4 and D.5 of this submission, international benchmarking would not be appropriate for determining DTCS prices. Domestic benchmarking, if done correctly, may assist in considering the appropriateness of various transmission prices.
Which are the appropriate benchmark countries from which transmission backhaul prices could be derived?	As detailed in sections D.4 and D.5 of this submission, international benchmarking is unsuitable for transmission pricing in Australia because of the lack of suitable benchmark countries upon which to make the relevant comparison. This is due to several factors, including Australia's uniquely low network utilisation, geographic factors, and differences in various cost drivers. These factors taken together ensure that any international benchmarking of the DTCS will be highly unreliable and therefore unsuitable for determining an appropriate regulated price.
Is the NZ regression-based benchmarking approach appropriate?	The New Zealand benchmarking approach is inappropriate because it does not take into account all of the factors relevant to transmission costs, particularly utilisation.
What are the relevant cost drivers in determining prices based on a benchmarking approach?	The relevant cost drivers are noted in section D.4 of this submission and the expert report of Mike Smart. One of the key cost drivers is network utilisation.

ACCC Question	Telstra response
How should information on domestic benchmark prices be collected?	As noted in section D.6, domestic benchmarking should be based on prices for comparable transmission services on workably competitive routes within Australia. Where appropriate, these benchmark prices should be adjusted for measureable differences between competitive and non-competitive areas.
Combined Approach	
Is it appropriate and/or preferable to use a combination of costing methodologies to price DTCS services?	There is no convincing theoretical argument for different approaches in pricing principles for the one service type.
If it is appropriate to use a combination of costing methodologies, which combination of methodologies would be the most effective in terms of estimating costs accurately and in the most resource effective way (eg for different services)?	For the reasons above, Telstra does not support a hybrid approach