30 January 2015

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Dear Mr Wright

Fixed line services final access determination inquiry: ACCC request for information

I refer to your request for further information dated 14 January 2014.

A response to each of the points raised in your letter is attached. In some cases Telstra has not been able to provide a complete response to a particular question. Where this is the case, the response sets out why Telstra is unable to provide a complete response, and where additional or alternative information may be able to be provided. Telstra appreciates that it is important that these issues are addressed in a timely manner to enable to the ACCC to advance its inquiry.

Please contact Alister Montgomery (03 8649 2008 / alister.montgomery@team.telstra.com) or Jodi Gray (03 8649 6264 / jodi.gray@team.telstra.com) should you have any queries.

Yours sincerely,

Iain Little
Deputy Executive Director – Regulatory Affairs
Corporate Affairs

Attachment: Response to ACCC questions

1. Forecast quantities of CAN and Core network assets

2. Forecast of capital employed for CAN and Core network assets

As discussed with ACCC staff, Telstra is unable to provide comprehensive answers to either question 1 or question 2 of this data request, or the associated templates sent to Telstra on 15 January 2015.

These questions and the associated templates seek, among other things, detailed forecast information on physical asset quantities and network topology (that is, geographic-specific forecasts on physical assets).

As explained in the Forecast Model Documentation, forecasts of capital expenditure are not developed by reference to forecast quantities of network assets expected to be required. Rather, Telstra's forecasts are developed based on historic trends in capital expenditure requirements, with adjustments for expected changes in demand for fixed-line services over the forecast period due to NBN migration.

Although physical information (i.e. quantities of specific infrastructure – measured in relevant units) is available for key asset types across the different FLSM Asset Classes, this information is generally point-in-time data. Telstra does not forecast physical quantities of assets in a systematic way.

To the extent that historic information is available, it will typically involve retrieving and querying older versions of infrastructure databases to extract the physical asset totals at a previous point-in-time. This approach could potentially yield a series of data points showing different equipment counts over time. However this information can only provide a broad indication of changes to the physical assets over a given period, as the observed differences in aggregate asset counts between two time points will not show where existing assets have been replaced or decommissioned – that is, this information would show the *net* change in equipment counts over time, but not the total amount of new equipment Telstra has added to the network over the same period.

3. Please explain why platform allocations are expected to remain relatively stable over the regulatory period when use of assets is expected to change significantly due to the NBN? (For example, platform allocations for inter-exchange cables, transmission equipment and third party access to Telstra racks are forecast to change only marginally. Although a more significant change in platform allocations is proposed for ducts and pipes, it nevertheless does not appear to correspond to the NBN rollout forecasts.)

The Cost Allocation Framework (**CAF**) recognises that several FLSM Asset Classes are used by services and service platforms beyond the fixed line services (i.e. services other than the retail and wholesale services that are provided over the CAN). For these Asset Classes, platform allocations are used to allocate a relevant proportion of the costs attributable to the asset class to non-fixed line service platforms, prior to remaining costs being allocated among retail and wholesale fixed line services.

For example, the assets contained in Asset Class CO04 Inter-exchange cables are used to transmit PSTN voice and ADSL data signals (both part of the fixed line services), as well as to support the transmission systems – which are part of the CO05 FLSM Asset Class – and other non-fixed line services such as the mobile phone network. The CAF uses data on the relative use of inter-exchange cables among the fixed line and non-fixed service platforms to

allocate costs and isolate relevant costs for the fixed line services prior to then allocating this proportion of costs among individual fixed line services.

It would be wrong to assume that the allocation of costs for all Asset Classes will necessarily change in direct response to the NBN rollout. The rollout of the NBN will impact certain FLSM asset classes in a more significant and direct way than it will others. For example, the use of the CA01 Ducts and Pipes asset class will be directly and significantly impacted by the NBN rollout. The platform allocator for this asset class is based on the usage of the conduit within the duct network. As the NBN rollout expands, the proportion of duct-kilometres per occupier (either Telstra, NBN Co or Access Seeker) within the duct network will change significantly as NBN Co installs additional infrastructure within Telstra's duct network. On the other hand, the use of core network assets is not expected to be as directly or significantly impacted by the NBN rollout. Whereas the NBN will result in a direct substitution of many CAN assets (or a direct change in use for a given asset), the expected impact on the use of the core assets will be less direct.

The allocation to different service platforms for Asset Class CO04 Inter-exchange cables is based on the proportion of fibre-kilometres. Over the forecast period, the physical reach of the PSTN is expected to remain similar to today. That is, the NBN rollout is unlikely to result in the complete removal of fixed line services from individual exchange service areas (**ESAs**) over this period. As a result, the number of inter-exchange fibre kilometres required for the PSTN and DSL service platforms is not expected to reduce. Equally, Telstra is not expecting to build significant additional fibre kilometres for the purpose of accessing the NBN. To the extent additional fibre kilometres are installed to support transmission infrastructure and non-fixed line data services, this is expected to reduce the relative use of this asset class by Fixed Line Services – as is reflected in the forecast platform allocators, which are based on an extrapolation of observed historical trends.

A similar situation is apparent for Asset Class CO05 Transmission Equipment. Although it is expected that the relative use of Transmission Equipment will change over the forecast period, the change is expected to reflect a continuation of existing trends. The *in situ* transmission links used to support PSTN and ADSL and other fixed line services are unlikely to be removed or no longer be in use – however it is likely that additional links will be installed to support non-fixed line services; consistent with observed historical trends.

It should be noted that Telstra is currently assessing the Transmission Equipment allocator to test whether it reasonably captures the diversity of equipment types that make up the asset class – including xWDM equipment. This is explained further in response to question 7 below.

4. Please explain how NBN Co use of dark fibre has been accounted for in cost allocation factors for inter-exchange cables

As set out in the CAF Model documentation, costs related to inter-exchange fibre cables are allocated to different service platforms based on records extracted from the Network Decision Support Database (**NDSD**) of the number of fibre kilometres used by different service and technology platforms.

The use of inter-exchange fibre cable by NBN Co (including dark fibre) is captured and accounted for by the NDSD. NBN Co use of inter-exchange fibre forms part of the "other" platform allocator within the CAF.

NBN Co's use of Telstra dark fibre assets is to support its transit network, linking its points of interconnect. Since the NBN Co transit network has now been completed, NBN Co's use of Telstra dark fibre assets is not expected to materially increase over the forecast period.

5. Please explain how the non-NBN related decline in demand for fixed line services is accounted for in Telstra's forecasts for operating expenditure and capital expenditure.

In general terms, within the Forecast Model, changes in operating and capital expenditure over time are driven by changes in demand (as well as changes in external factors such as labour rates, CPI, power costs and other relevant factors). Changes in demand reflect both non-NBN related changes to service demand (reflected in the "pre-NBN forecasts" in the demand sheet of the Forecast Model) as well as direct NBN impacts.

Certain changes in expenditures are a direct function of the NBN rollout and rate of premises passed by the NBN (e.g. capital expenditure related to duct remediation for the NBN); however, where changes in demand are a factor impacting forecast levels of operating and capital expenditure, the impact is the same irrespective of whether the underlying cause is due to the NBN, or non-NBN factors.

In most cases (except for NBN-related capital expenditure) expenditure requirements are related to forecast service demand, which is in turn a function of the NBN migration rate and other factors influencing service demand. Where expenditure requirements are related to forecast service demand, the impact of declining demand on these expenditure requirements is the same regardless of what is causing that decline in demand (i.e. regardless of whether it is caused by NBN migration or other factors).

6. Please explain whether, and if so why, the impact of the non-NBN related decline in SIOs is assumed to have a different impact on expenditure forecasts to that due to the NBN rollout.

As set out above, the Forecast Model logic does not differentiate between the different underlying drivers of changes in demand when determining the impact of changes in demand on operating and capital expenditure.

7. What is the nature of Telstra's investment in transmission capacity:

a. What proportion of this investment is for replacement and what proportion is for capital-widening?

Telstra does not differentiate its capital expenditure in terms of replacement or capital widening. Capital expenditure is managed through Investment Management Committee (**IMC**) programs (that sit under broad funding programs) that are each driven by specific business drivers.

b. Is Telstra continuing to invest in legacy (SDH) transmission equipment? If so, please explain the reasons for continuing investment in SDH multiplexers. Also, please provide the proportion of investment in transmission equipment accounted for by SDH technology.

Telstra is continuing to invest in synchronous digital hierarchy (**SDH**) transmission equipment. SDH is a carriage technology which supports the delivery of both traditional voice and data services as well as growth IP services (based on Ethernet technology).

SDH technology is not a "legacy" technology that is being replaced by xWDM. Within Telstra's transmission network, SDH connections represent the vast majority of connections and support services across a large number of platforms. Telstra's transmission network is comprised of several different technology types, including SDH and xWDM which work in a complementary fashion.

The rationale underpinning Telstra's capital expenditure investment is asset optimisation – accordingly, Telstra will continue to deploy technology such as SDH (which is still current and effective) in situations where this drives the right business outcome. Similarly, Telstra will move to deploy other current technologies (such as xWDM equipment) in the same optimised approach. Any capital expenditure spend is subject to a rigorous business case and the development, integration and deployment of technology is undertaken to meet customer requirements economically.

As a practical matter, SDH remains (and is likely to remain for the foreseeable future) the most effective technology for supporting redundant, carrier grade transmission for bandwidth requirements of up to 10Gb/s. SDH can effectively and efficiently support transmission links ranging from 2Mbp/s (the most common bandwidth within Telstra's network) – typically used to support PSTN switching infrastructure and end user data access services – through to 155Mbp/s and beyond 1Gbp/s.

xWDM based technologies have been deployed in Telstra's network for at least the last 15 years. xWDM is generally used in the network core to expand the capacity of fibre infrastructure to support large capacity carriage. A range of different transmission and data protocols can sit on top of xWDM systems – including legacy and new generation SDH transmission – to support the carriage of all service types, including PSTN/ATM services, Ethernet and IP data services, as well as other Wireless and fixed line data. It is generally not efficient to deploy xWDM technology to natively support lower bandwidth links. Where capacity requirements are high, (i.e. greater than 10GB), Telstra will likely deploy xWDM technology but will often complement this investment with SDH links which are then used to provide redundancy.

Asset values for both xWDM and SDH transmission equipment are recorded in Telstra's asset register under the SD asset category. Table 1 below sets out the proportion of written down asset value for SDH and xWDM equipment, as a percentage of the Transmission Equipment Asset Class as at June 2014.

Table 1: Proportion of written down asset value for SDH and xWDM equipment as a percentage of Transmission Equipment

Asset type	% of FLSM Transmission Asset Class - WDV June 2014
SD - SDH	[redacted]
SD - xWDM	[redacted]
PD (PDH)	[redacted]
Other	[redacted]

Since 2010, expenditure relating to total net asset additions for transmission equipment has continued to be skewed toward SDH investment. Over the last five years, approximately [redacted] of the capital expenditure for the SD asset category within the Transmission Equipment Asset Class has been for SDH technology, with around [redacted] spent on xWDM equipment. The relevant break down is set out in Table 2 below.

Table 2: Breakdown of capital expenditure for the SD asset category within the Transmission Equipment Asset Class

	2010	2011	2012	2013	2014
% Capital Expenditure - SDH	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
%Capital Expenditure - xDWM	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

The fact that SDH continues (and is expected to continue) to constitute the bulk of Telstra's investment in transmission equipment is not surprising given its deployment in the network edge, requiring vastly more connections and systems than is necessary in the core network. The vast majority of Telstra's transmission links (and the majority of its investment and operating cost) relates to smaller sub-10Gb/s links. These links – which are typically addressed using SDH transmission equipment – are used to connect end user services and network edge devices (PSTN switching equipment, DSLAMs, mobile base stations) to the core.

Table 3 sets out the number of SDH transmission links by bandwidth and the number xWDM systems installed in the network as at January 2015. This indicates that the vast majority of transmission systems within the network relate to SDH type equipment, and for capacity requirements sub-10Gb/s links.

Table 3: Number of SDH transmission links by bandwidth, January 2015

Link Type	SDH VC12 2Mb	SDH VC3 45Mb	SDH VC4 155Mb	SDH STM1 155Mb	SDH STM4 622Mb	SDH STM16 2.4Gb	SDH STM64 10Gb	DWDM systems
# of systems	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

c. Is Telstra investing in technologies such as xWDM with regard to the replacement of its legacy PSTN / ATM networks for an Ethernet-based NGN? Please explain whether cost allocation for transmission assets is affected by any change in technology deployed.

As set out above, SDH technology is not a "legacy" technology that is being replaced by xWDM. SDH remains a critical technology platform for the provision of redundant, dedicated transmission across Telstra's network – providing carriage of traditional fixed line voice services (and legacy data protocols) as well as Ethernet-based services and modern IP-based data protocols and related services. In contrast, xWDM is primarily deployed within the network core. xWDM is used as a "fibre multiplier" and is efficient in addressing very large bandwidth requirements (e.g. greater than 10Gb/s) – typically required in the core network.

Currently the CAF model disaggregates the transmission equipment asset class into plesiochronous digital hierarchy (**PDH**), SDH and other network equipment for the purposes of determining cost allocations. Under this approach, xWDM equipment is implicitly assumed to have the same usage allocation to services as SDH equipment.

Telstra is currently investigating whether a further disaggregation of transmission equipment to account explicitly for xWDM equipment would improve the allocation approach for this Asset Class, and whether sufficient network data is available to support this approach.

8. Please provide details of how Telstra's capital expenditure forecast for the top 10 IMC codes are reconciled with its forecast model provided as part of submission to the discussion paper.

As set out in the Forecast Model documentation, capital expenditure forecasts are based on recent actual expenditure trends at an FLSM Asset Class level, by expenditure funding program.

Telstra has not forecast capital expenditure at the IMC level due to the complexity inherent in determining reasonable forecasts at such a disaggregated level. It is possible though to observe trends in capital expenditure forecasts across asset classes.

IMCs generally include capital expenditure across a range of FLSM Asset Classes, adding complexity when determining longer-term forecasts, as the rollout of the NBN will likely have different impacts across different Asset Classes. The rollout of the NBN will clearly impact certain FLSM asset classes in a more significant and direct way than it will others. For example, demand (i.e. Demand and Baseline funding programs) driven capital expenditure on CAN assets (including ducts and pipes, copper and other cables) is likely to reduce as the NBN rollout expands. However the impact of the NBN is likely to be far less pronounced on capital expenditure requirements for Core Asset Classes.

Table 4 sets out capital expenditure for the top 10 IMCs (based on expenditure attributable to the FLSM Asset Classes) for FY2015. Nine of the top ten IMC are capital programs within the Demand/Baseline funding programs, with one funded under NBN-related capital expenditure.

Table 4: Capital expenditure on the top 10 IMCs (FY2015)

Top 10 IMCs by Expenditure on FLSM Asset Classes (FY2015)	Funding Program		
	Demand/ Baseline	NBN	Subtotal
[redacted]			

Table 5 below sets out capital expenditure for each of the above IMC programs by FLSM Asset Class for FY2015.

[1] This total can be reconciled with the total in cell I169 of the worksheet 'Capex Forecasts'.
[2] This total can be reconciled with the total in cell I479 of the worksheet 'Capex Forecasts'.

Table 5: Capital expenditure for each of the above IMC programs by FLSM Asset Class for FY2015

Code	Asset Class	[redacted]
CA01	Ducts and pipes	
CA02	Copper cables	
CA03	Other cables	
CA04	Pair gain systems	
CA05	CAN Radio Bearer Equipment	
CA06	Other CAN assets	
CA07	Other Communications Plant and Equipment*	
CA08	Network Land*	
CA09	Network Buildings/Support*	
CA10	Indirect Capital Assets*	
CO01	Switching Equipment - Local	
CO02	Switching Equipment - Trunk	
CO03	Switching Equipment - Other	
CO04	Inter-exchange Cables	
CO05	Transmission Equipment	
CO06	Core Radio Bearer Equipment	
CO12	Data Equipment	
	Total	

9. Please explain why propex is incurred for some asset classes and not others.

Propex is operating expenditure related to a specific capital project. Capital expenditure projects are grouped in Telstra's Investment Management Planning Database under specific codes (IMC codes).

Not all IMCs, or the underlying business cases that sit under a given IMC, will have propex attached. This is because a particular project may not have expenditure that is categorised as operating expenditure (i.e. all expenditure associated with the project has been capitalised). Telstra complies with Australian Accounting Standards in regard to cost treatment of activities for all projects, and it is the nature of the activities that are undertaken on a project that determine whether costs are capitalised or not under these standards.

For some capital projects, the ratio of capital expenditure to operating expenditure (propex) can be very high, whereas in other cases operating expenditure may significantly exceed capital expenditure for a given project. This will vary project-to-project and the nature of the activities on a project will determine how relevant expenditures are classified (i.e. whether or not the expenditures are capitalised or expensed). For example:

- [redacted]
- [redacted]

Different IMCs relate to different asset classes (typically multiple asset classes) and, as such, will incur capital expenditure across multiple asset classes. Where a particular IMC has propex associated with it, this expenditure is also allocated to the relevant FLSM Asset Classes. Forecast propex is then based on the average ratio of propex to capex observed in the past three years, in accordance with the following formula:

$$Propex_{t0} = Average(Propex_{t-1}, Propex_{t-2}, Propex,_{t-3})/Average(Capex_{t-1}. Capex_{t-2}, Capex_{t-3}) \times Capex_{t0}$$

No historic propex (or capital expenditure) information was recorded against the CAN and Core Network Land FLSM Asset Classes (CA08 and CO08), or for the LSS equipment FLSM Asset Class (CO11) and therefore no propex is forecast for these FLSM Asset Classes over the FY2015 to FY2019 period.

However, in seeking to address the ACCC's question Telstra has determined that for the FLSM Asset Classes CA07, CA09, CA10, CO07, CO09 and CO10, historic propex information was inadvertently excluded from the forecast model. As a result of this error, forecast propex was not recorded for these Asset Classes.

Table 6 sets out the historic actual propex attributable to these FLSM Asset Classes (FY2012 to FY2015), as well as the calculated forecast propex.

[3] Telstra, *Corporate Accounting Policy (CAP) 012.2: Property, Plant and Equipment – Asset Expenditure Recognition Rules*, dated 10 November 2014, section 10.1.2 (Annexure 1 to this letter).

Table 6: Historic actual propex and forecast propex by FLSM Asset Class ($ million)

Code	Asset Class	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
CAN Asset Class									
CA07	Other Communications Plant and Equipment	[redacted]							
CA09	Network Buildings/Support								
CA10	Indirect Capital Assets								
Core Asset Class									
CO07	Other Communications Plant and Equipment	[redacted]							
CO09	Network Buildings/Support								
CO10	Indirect Capital Assets								

10. Please explain the methodology used to ensure that propex does not double count the labour-intermediate input components when it is added to capital expenditure for certain asset classes.

As noted above, propex is defined by Telstra as operating expenditure related to capital projects. Propex is not a capitalised expense. This expenditure is incurred by various business units within Telstra. To ensure no double counting of operating expenditure in the forecast model, Telstra deducted FY2014 propex for the base year operating expenditure for the relevant lines of business that make up the operating expenditure forecasts within the Forecast Model (Customer Service Delivery and Networks).

Of the [redacted] propex shown in the "Opex forecast" worksheet in the FLSM model for FY2014, a total of [redacted] was incurred by the following groups within Telstra Operations:

Table 7: FY2014 propex by Telstra Operations Line of Business

	Propex incurred
CSD	[redacted]
Networks - FIXED & DATA ACCESS ENGINEERING	[redacted]
Networks - TRANSPORT & ROUTING ENGINEERING	[redacted]
Networks - CONSUMER AND MOBILITY PRODUCT ENGINEERING	[redacted]
TSO	[redacted]
ITS	[redacted]
TOTAL	[redacted]

The remainder of the propex [redacted] was incurred by groups which do not contribute to the operations and maintenance of the fixed line network (and therefore do not form part of the forecast opex set out in the Forecast Model). These groups include the Network Delivery and Network Infrastructure Management groups of the Networks line of business and other lines of business of Telstra Operations.

To ensure double counting did not occur when computing the relevant amounts for both propex and operating expenditure, Telstra excluded a total of [redacted] across all assets from CSD opex GL accounts, and a total of [redacted] across all assets of Networks, TSO and ITS opex GL accounts. These amounts total [redacted]. Therefore the amounts of opex entered for CSD, Networks, TSO and ITS lines of business in the "opex forecast" worksheet of the FLSM model are net of propex.

11. *Please provide Telstra's capitalisation policy*.

Telstra's current capitalisation policy (*Corporate Accounting Policy (CAP) 012.2: Property, Plant and Equipment – Asset Expenditure Recognition Rules*, dated 10 November 2014) is provided with this letter (Annexure 1).

All expenditure that is related to a project of work will either be characterised as capital expenditure or propex in accordance with this capitalisation policy. Remaining expenditure is categorised as operating expenditure.

12. Please provide reasons why costs caused by operations relating to the NBN rollout should be shared between access seekers and Telstra retail.

Telstra wishes to clarify its submission in relation to the fault volume/rate forecasts used in the determination of opex, and any impact of the NBN rollout and associated activities within the CAN on those fault rates or volumes. [redacted]

[redacted]

Telstra wishes to confirm that the forecast of fault rates used to determine its fault volume forecasts, referred to above, does **not** include any explicit assumption of an increase in fault rates associated with increased work in the CAN during the rollout.

It is not correct to imply that the expected increase in the fault rate over the forecast period was due to the NBN rollout impacting on the CAN fault rate. Although the NBN rollout – in theory – has the potential to impact on CAN faults in future, this potential impact is not factored into the forecasts used in the Forecast Model or into Telstra's official business forecasts.

Telstra's fault forecast methodology involves use of trailing historical data, which is then extrapolated over the relevant period. As noted in the Forecast Model Guide, the fault rate in the copper network has been growing over the period from 2003 to 2014 by a compound annual rate or approximately [redacted]. This is due to a number of factors, including ageing cable and joint infrastructure, a reduction in new or replacement capital expenditure on the CAN, and an increase in the uptake of technologies with a higher incidence of fault reporting by customers (e.g. ADSL broadband services).

Because the NBN rollout has not materially progressed to date, the historical fault data used for the purpose of compiling the fault rate forecast does not include any material effect from NBN-related activities in the CAN, or associated faults (because the rollout has not yet been sufficient to generate any meaningful number or trend in NBN-driven CAN fault data).

Based on historic trends, internal management forecasts the fault rate to continue to rise over the next regulatory period at a faster rate than assumed in the Forecast Model. However Telstra has conservatively assumed for the purpose of its FLSM forecasts that the increase in fault rate will be moderated by the impact of a joint remediation project that will lead to the rates remaining flat throughout 2015 and 2016 (despite the program having a limited scale and scope).

The internal management forecast of the fault rate is used to derive the forecasts used in the Forecast Model as follows:

- the internal management forecasts of fault volumes and fault rates were used as the starting point for the forecasts used in the Forecast Model. [redacted]. Since this forecast is based on historic data, it does not reflect any material effect from NBN-related activities;

- the internal management forecast of the fault rate was adjusted downwards, reflecting a conservative assumption that there would be some moderation in fault rate growth due to the joint remediation program. This adjusted fault rate forecast is set out in Table 13 of the Forecast Guide, and is used as an input into the Forecast Model; and

- the forecast of fault volumes in the Forecast Model is the product of the adjusted fault rate, determined as described above, and forecast service demand.

As such, the forecast of fault volumes in the Forecast Model:

- does **not** include any allowance for any increase in the incidence of faults associated with NBN's work in the CAN, associated with migration activities; and

- is conservatively based, given that it assumes a positive impact of the fault remediation program on the fault rate that extends beyond that reflected in Telstra's own internal forecasts of fault rates.

13. Please provide details of the nature of this capex and why this expenditure should be attributable to the fixed line services rather than NBN users?

Telstra will provide the ACCC with a follow up response as soon as possible.

14. [redacted]

Telstra is currently confirming this cost estimate with the relevant business experts and will provide the ACCC with a follow up response as soon as possible.

15. [redacted]

Telstra is currently confirming this derivation with the relevant business experts and will provide the ACCC with a follow up response as soon as possible.

16. Also, please provide details on how Telstra allocates the NBN related capex through its cost allocation framework? The ACCC notes that the NBN related capex is proposed for asset class listed below. However, Telstra's CAF does not allocate cost to NBN for CA03, CA04, CA07 or CA09. For CA01 Ducts and pipes, Telstra's CAF allocates cost on usage basis. Given that the NBN related cost is on remediation, therefore, it does not appear that the RAF has appropriately allocated the NBN related capex to NBN.

Telstra will provide the ACCC with a follow up response as soon as possible.

17. If possible, please provide details of how its capital expenditure forecast for the top 10 IMC codes are reconciled with its forecast model provided as part of submission to the discussion paper.

This question appears to be a repeat of question 8. See Telstra's response to question 8.

18. ***Please explain how this discrepancy in time is factored into the brownfield rollout rate?***

As set out in the Forecast Model Documentation and Telstra's October 2014 submission in response to the Discussion Paper, the Forecast Model is designed to be able to test the impact on future operating and capital expenditure arising from different NBN rollout scenarios. The model was designed in this way due to the inherent uncertainty of the NBN rollout.

The NBN Rollout Base Case that Telstra has adopted in its primary submissions reflects a particular view of the NBN rollout and migration rate based on publically available information from NBN Co and relevant data on customer migrations.

By modifying the values in cell range Q29:U32 in worksheet "NBN Rollout Parameters", it is possible to observe the impact on service demand, forecast operating and capital expenditure, cost allocation and the resulting revenue requirement calculations for alternative NBN rollout scenarios.

As set out in the Forecast Model Documentation, Telstra developed its NBN Rollout Base Case by interpolation of the NBN rollout expectations set out in Exhibit 4-2 of the NBN Co Strategic Review. If the ACCC considers that the NBN Rollout Base Case scenario should be amended – based on other information set out in the Strategic Review – then this can be accommodated by the Forecast Model.

Telstra is looking to assess the most recent available data on the NBN rollout schedule, as well as information on the rate of migration within areas that have passed the Ready for Service date to determine whether amendments to the current NBN Rollout Base Case are warranted.

19. ***If forecasts have been derived from an extrapolation of the historic data, please provide the functional form used and the number of years of data used.***

Telstra will provide the ACCC with a follow up response as soon as possible.

20. ***Please indicate what assumptions Telstra has made concerning the impact of the NBN rollout on the pattern of access seeker demand.***

Telstra has not made any explicit assumptions regarding the impact of the NBN rollout on the relative take-up of different fixed line services. As explained in the Forecast Guide, the NBN rollout is assumed to impact "pre-NBN" demand forecasts in an equi-proportional manner. Telstra has not developed a geographic-specific set of forecasts for the NBN rollout that could result in different fixed line services experiencing different migration rates due to the geographic distribution of these services.

Further, Telstra has assumed that the NBN rollout will not, in and of itself, result in variations to the relative take-up of different regulated wholesale services. That is, there is no assumption that wholesale customers will change their service mix in response to the NBN rollout.

21. ***Further to the ACCC request for information in relation to data related to the Internal Interconnection Cable (IIC) and TEBA rack services we also require information on the demand for these services. Please provide the following demand data for the IIC and TEBA rack services:***

    a. ***Forecasts of demand for IIC copper pair installed for each financial year from FY15 to FY19.***

    b. ***An explanation of the methodology used in determining the forecasts, including the assumptions used.***

    c. ***To the extent possible, historic demand information for IIC copper pairs installed and rack demand (in terms of Telstra, TEBA and NBN usage) for each financial year for the period FY09-FY14'***

This information was provided to the ACCC on 19 January 2015 in our response to a previous information request.

22. ***To which business unit/ LOB are contractor costs for connection and disconnection activities assigned?***

23. ***Have the contractor costs for connection and disconnection activities and the associated internal management charges been deducted from the operating expenditure forecast for the business unit in answer to Question 5? If so, how and at what stage in the method for determining the FLSM costs for that business unit does the deduction occur?***

In response to question 22, contractor costs for connection and disconnection activities form part of the operating expenditure of the CSD line of business within Telstra Operations.

Contractor costs include the direct expenditure on the contractor workforce (payments made to external technicians for the performance of connection and disconnection tasks) as well as indirect expenditure, which includes the management costs and overheads of the contractor workforce and management fees paid to the contractor coordinator (**ISGM**).

In response to question 23, Telstra has determined that the contractor costs associated with connection and disconnection activities form part of the base year (FY2014) operating expenditure for CSD within the Forecast Model. The direct and indirect operating expenditure related to contractor activities involving connection and disconnection of services are set out in Table 8.

Table 8: Contractor costs for connection and disconnection activities

	Contractor costs for connection and disconnection activities
Direct cost	[redacted]
Indirect cost	[redacted]
TOTAL	[redacted]

24. Please provide detailed methodology and calculation in an excel file on Telstra's updated international benchmarking and asset and equity beta to enable the ACCC to verify Telstra's calculations.

The relevant excel file containing Telstra's updated international benchmarking of asset and equity betas is provided as Annexure 2. This will enable the ACCC to verify Telstra's calculation.

Annexures

1. Telstra, *Corporate Accounting Policy (CAP) 012.2: Property, Plant and Equipment – Asset Expenditure Recognition Rules*, dated 10 November 2014

2. Telstra's updated international benchmarking of asset and equity betas