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Mr Bruce Chan
A/Executive Director
Office of the Rail Access Regulator (WA)
PO Box 7459 Cloister Square
Perth WA 6850

12 April 2002

Agreed Procedures Review of WestNet Rail Access Pricing Models

Dear Mr Chan

We have performed the procedures agreed with you at the meeting on Monday 7 January 2002 and described below with respect to the review of WestNet Rail ("WestNet") access pricing models.

Our engagement was undertaken in accordance with Australian Auditing Standards as applicable to procedures agreed-upon for this engagement listed below. The responsibility for determining the adequacy or otherwise of the procedures agreed to be performed is that of the Office of the Rail Access Regulator (WA). This review relates only to the model versions received by PwC in the week commencing 7 January 2002 and does not extend to any other WestNet documents.

The procedures performed were completed solely to assist the Regulator in assessing the accuracy and adequacy of WestNet's access pricing approach and associated models and are summarised as follows:

1. Evaluate data and model integrity risks.
2. Confirm model assumptions and logic are consistent with the proposed WestNet "Costing Principles" (15 November 2001); and.
3. For a selection of five line sections within the Kwinana to Bunbury Inner Harbour route assessment of the:
   - Mathematical accuracy of the access pricing calculation and its supporting models.
   - Reasonableness of the calculations used within the allocation methodologies (as outlined in the Proposed Costing Principles).
   - Information consistency between the various models.
   - Validity and reasonableness of source data by, where possible, tracing cost information back to supporting documents.

As the above procedures do not constitute either an audit in accordance with Australian Auditing Standards or a review in accordance with Australian Auditing Standards applicable to review engagements, we do not express any assurance or opinion on the calculated access ceiling price.

Had we performed additional procedures or had we performed an audit in accordance with Australian Auditing Standards or a review in accordance with Australian Auditing Standards applicable to review engagements, other matters might have come to our attention that would have been reported to you. We do not accept any responsibility for losses occasioned to WestNet or to any party other than the Regulator as a result of this review.

Key Findings

We report as follows:

1. There are some significant risks inherent in the approach used by WestNet to calculate ceiling access prices. The following issues were identified as having the potential to materially compromise data integrity and calculation accuracy, including:
    - The access price modelling is divided into a large number of separate files consisting of:
        - Base data files (2): a GTKs and train numbers file and a line distance file.
        - Operating cost files (3): files for track, signals and communications.
        - Capital cost files (4): track, signals, communications and interest on construction costs.
        - An Overhead Costs File.
        - A Summary Sheet for ceiling price calculation which uses base data and aggregates results from the various cost files.

      Many of the above files are then further segmented into four or more similar files for different network segments. The models have had a variety of different developers making it more difficult to follow model logic and isolate key results. This approach increases the risks of error, as corrections or refinements to the model being utilised may not flow through consistently to all other models. WestNet recognises the added risks created under this approach and is currently developing a new single model pricing system to replace the existing multiple file system.

    - An absence of formalised price calculation procedure. As an interim measure WestNet is using a flow chart which summarises the key components and requirements of calculating an access price. WestNet acknowledges the need to develop a detailed price calculation procedure to assist in ensuring prices are calculated on a consistent and accurate basis and such a procedure is being developed in conjunction with the new single model pricing system.

    - An absence of formalised procedures for updating the models. These models require periodic updating for changes in volume, track distances or component types and cost levels. However, WestNet concur that a procedure for updating the models is required and they plan to develop such a procedure once the general approach to modelling is refined and finalised. A procedure for updating the model is essential given the large number of models to ensure corrections are consistently processed across all models.

    - An undesirable extensive reliance on hard coded (or directly inputted) data throughout the majority of sheets across almost all models. Key model assumptions are present and repeated via direct input across the majority of sheets which creates additional risks. Assumptions should be centralised on one sheet with the remainder of the model presenting formula based calculations which are then protected from further unauthorised or inadvertent inputs or amendments.

- Inadequate spreadsheet security with no password protections being utilised. However, this security issue is partly mitigated by the models being stored on a restricted drive accessible to only the Access Policy Manager WestNet and the General Manager WestNet.

- Some of the models have sizeable components which have been superseded, however the superseded sheets have been retained eg the Track Valuation Model includes GRV estimates for signals and communications assets which are now estimated in separate models. This approach creates the need for a range of adjustments and increases the risk that incorrect or unadjusted results could be utilised.

- An absence of links from the access price model to its source data models (eg GTKs, distances) and other cost models to ensure updates to source data or costs automatically flow through to enable accurate price calculations. For example distance information was sourced from a variety of locations (maps, other reports etc) rather than the most accurate GIS data. Whilst to date the resulting errors which were detected were not material, the risks associated with directly inputting source data are far higher than utilising source data via a link from a single current data set. Similarly results from operating cost and capital costs models are pasted in as values (rather than links) into the final summary calculation sheet. Again this absence of links increases the risk of error due to instances such as pasting incorrect results or failing to update results in the summary sheet.

- WestNet has stated that the current access pricing models are not intended to have the capability to assess combinatorial (floor or ceiling) test compliance or to assess any overpayments. WestNet advises that to date combinatorial ceiling test compliance has been assessed by completing sensitivity testing in separate spreadsheets. PricewaterhouseCoopers has not reviewed these separate combinatorial ceiling sensitivity test spreadsheets. As the combinatorial ceiling test will typically be the binding ceiling, development of this capability, as well as an overpayment assessment capability, within an integrated pricing system should be pursued. WestNet advises that these capabilities are currently being included within its new single model access pricing system.

- The access pricing models are reliant on one individual (WestNet Access Policy Manager) to calculate, maintain and update as required. Given the absence of documented price calculation and updating procedures and the complexity of the approach to calculating prices, this reliance poses significant issues should this individual become unavailable.

2. Overall the calculations and modelling are broadly consistent with WestNet's interpretation of the requirements of their proposed Costing Principles (of 15 November 2001). Testing price accuracy via sampling found some minor but not material errors. However, the risks outlined above are unnecessarily high and create the potential for a significant pricing error.

   The proposed Costing Principles contain requirements such as setting ceiling prices based on the efficient costs of a new modern equivalent network. WestNet is aware of such requirements and believe that their modelling approach and its inputs is compliant. This review has not assessed whether the approaches taken by WestNet to attempt to comply with their Costing Principles are reasonable. During the process of sampling and tracing through the access pricing models the following issues for improving accuracy and compliance with the proposed principles were noted:

- Capitalised interest costs are being calculated assuming 11% interest and construction at 0.5km per day. These costs are then allocated across line segments using GTK's. We recommend that track distance is a more accurate allocation method.

- Communication capital items are apportioned between WestNet and AWR based on percentage usage. This is potentially understating the communication GRV for WestNet as they would still require the majority of the assets even if not shared with AWR.

- General communication maintenance costs continue at the same rate following the upgrade to a backbone communication system. We recommend WestNet complete a detailed re-estimation of the likely maintenance costs for the upgraded system as the maintenance costs may be above or below current levels.

- The Code requires the floor test price to be set at incremental costs or the operating, capital and overhead costs the owner can avoid (in the 12 months after access would start) if access to an operator was not provided. The Summary Model contains a 'floor price calculation' sheet. The methodology used in this sheet is potentially inconsistent with the Code and the theory of avoidable costs. WestNet assume the floor cost is the sum of operating costs and allocated overheads (as per the ceiling test) multiplied by the % of GTKs on a route attributable to the customer. To date WestNet has not included a % of the capital cost. A more conventional approach would assess the significance of the customers and then separate operating costs and overheads into fixed and variable components with the variable component providing an approximation for avoidable costs. WestNet advises that the new single model access pricing system which is under development will have a more accurate capability for calculating floor prices including combinatorial floor prices where appropriate.

3. Overall, sample testing of the mathematical accuracy of the models over five line section has found them generally acceptable. However, the sample testing of price calculations did detect some minor errors and data inconsistencies. Whilst the errors detected are not large enough to materially alter the ceiling price over the whole Bunbury to Kwinana section, the errors serve to confirm some of the risks identified in 1 above. Examples of relatively minor errors include:

   - A distance error was noted in the Track Valuation Model resulting in overstatement of 'Brunswick JN to Picton JN' GRV by approximately $0.32m (2.6%). Some other minor data inconsistencies relating to the distance information being derived from different sources and on different bases (eg excluding or including sidings and loops) were noted.

   - The summary sheet assumed that the signals capital cost included a project management margin of 10% and this was deducted and adjusted to the proposed 34% margin. However, the actual project management cost in the signals capital cost model equates to 5.26% and hence the signals GRV (prior to margins) for Kwinana to Bunbury Inner Harbour is understated by $1.253m.

Other findings in relation to Task 3 are:

- The allocation methodologies used in the models are consistent with those nominated in the WestNet Proposed Costing Principles. The approach used to complete the allocation is generally reasonable.

- The various source documents utilised have been as far as possible identified and are listed in the Report.

Our overall recommendation is that WestNet expedite the project to re-establish the access price modelling into a new single access pricing system. The current approach has significant risks and a well designed new single access pricing system has the potential to mitigate a large proportion of these risks.

Yours faithfully

Andrew Edwards
Partner
PricewaterhouseCoopers