

ECONOMIC PLANNING ADVOCACY

LAND DEVELOPMENT INFRASTRUCTURE INVESTIGATIONS

17 August 2008
pmp

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The Independent Pricing and Regulatory Tribunal
L8/1 Market St
Sydney NSW 2000

Attn Mr R Warner

Dear Sir

Draft Determination and Report for Metropolitan Development Charges

I attach a number of documents I have prepared to enable me to examine the Draft Determination and Report.

The general intent of Draft is agreeable and is more or less as expected in discussions with SWC. These include:

1. Maintain the Guideline principles (ie 1995 and 2000);
2. Adopt average demand (ie exclude peak demand);
3. Allow amalgamation for areas with good nexus;
4. Allow a single authority jurisdiction wide net revenue amount;
5. Require apportionment by capacity for major assets;
6. Improve transparency and accountability;
7. Facilitate two staged charges for industrial and commercial developments;
8. phased release of the DSPs to provide a proper time frame for their review.

Attached are:

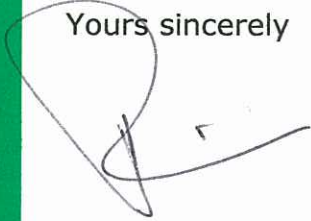
- A. A review of the principles and preferred outcome.
- B. A review of the Report which is mainly a review of the list of IPaRT decisions in Clause 1.7 of the Report.
- C. A review of the Draft Determination

D. A copy of a suggested insert to the Determination;

- A copy of the NPV Formula paper by Squirrell and Webster (1994)
- MS Word extracts from the Draft Determination with tracked changes to provide comments and changes in the context of the Determination.

I thank you for the opportunity to comment and hope to discuss the matter further including I understand at a proposed workshop.

Yours sincerely

A handwritten signature in dark ink, appearing to be 'Peter M Price', written over the typed name.

Peter M Price

PART A & B

Review of the Report for Metro Charges from 1 July 2009

By P Price

11 August 2008

Introduction

The following discusses the issues raised by IPaRT, in three parts which include:

- A. A review of the issues of principle and the preferred outcome.
- B. The Report
- C. The Draft Determination (*see separate text file*)

A. The Preferred Outcome and Residual Issues

I have spoken to SWC on a number of occasions and think I have some (not all) in principle agreement (**IPA**) with their positions as indicated below. These were:

1. Retention of the basic principles in the 1995/2000 Determinations. Clearly as SWC submitted, they want some significant changes.
2. Allow metro water authorities (MWAs) to amalgamate current DSP areas (SWC propose 23 Sewerage and 13 Water). - (**IPA**)
The agglomeration principle/formula is ok if further amalgamations are proposed.
3. Allow a single authority jurisdiction wide net revenue amount (**IPA**);
4. Agree that apportionment be based upon average pre/post BASIX **capacity**/demand on a whole of system approach;
Whole of System means that the cost of all assets are apportioned over all ETs. For the purpose of the NPV model 2009-2039 the % share of the cost for existing users pre 2009 and any surplus is deducted before the 3% or 7% discount rate (ie interest) is applied (SWC prefer peak demand despite abandoning this principle for sewerage charges). At a recent meeting with SWC, average was expected to be IPaRT's position.
5. All calculations be from DSP Review Date (not 1996) - (**IPA**)

6. MEERA to be replaced where possible and practical with contract costs plus CPI for existing asset costs post 1996.

It is not reasonable to accept all 2005 MEERA rates should stay in place, as SWC has stated, it has proved not to be an efficient cost method. One obvious example is the capital cost for Gerringong/Gerroa (completed in 2002).

Future assets costs should be based upon projected contract cost.

7. Inclusion of Developer provided assets in DSP (IPA) ;
8. MWAs to move to two stage charges for Industrial and commercial (note SWC commenced on 1 July 2008) - (IPA);
9. Deletion of any reticulation works charges in DSPs (IPA);
10. Improvement of the demographic analyses;
11. Better accountability and transparency including access to data and technical liaison (IPA);

The qualification however is that in general it has been quite extraordinary what it seems SWC claim they DO NOT have or is just plain not available to the industry including:

- historical cost data;
- major asset capacity data;
- operational revenue and costs including 20 year projections;
- up to date design criteria - particularly for major assets;

A third rate regional water authority can do better than that.

The next time the industry gets access to data apart from the DSP calculations up to but not including the 2006 DSP, will be the first obtained in more than 10 years of asking AND being given verbal and written assurances.

12. Delete recycled water charges;
13. Resolution of the unsatisfactory RAB process which disadvantages development charges (IPA);
14. **Regulatory Asset Base (RAB)**

Of continuing and significant concern as pointed out in the SWC submission to

the Metro Charges Inquiry, the RAB is being calculated in a way that may impact unfairly on development charges.

It is also noted in the recent Pricing Determination Report that borrowing costs are being capitalised by SWC in the RAB. How does this impact upon development charges?

The industry needs an explanation of the whole basis of the RAB inputs and outputs.

The view of IPaRT, as the industry understood it, in regard to the 1995 Determination, was that the capital cost element of the development charge model element is a stand alone calculation. This was also specifically expressed in response to a query's made by the then DLWC.

The net revenue element however has always been an unsatisfactory calculation process. There has been little logic in the determination and in practice. The principle was correctly identified by DLWC in the Guidelines even though their model failed in practice. It appears likely that the revenue impacts of RAB will also occur here.

Clearly any clarification of the RAB process needs to explain why:

1. The method of deducting Development Charges from the RAB may in turn increase development charges;
2. The inclusion of capitalised borrowing costs may have the effect of not only double dipping on the rate of return included in the annual charges, but also on the full interest included in development charges. While the Report suggested that the capitalisation of borrowings would be covered in the Draft Determination it has not been found to date.
3. It seems the RAB is based upon historical cost though there are deductions including development charges and depreciation and additions including indexation. The principle point is that if historical data is available, why should MEERA be considered at all. Historical cost plus an index (say CPI) ought to provide a starting point as it did in 1995.

Thus as stated in Point 6 above, why should not the threshold for asset values start at 1996.

In Part C of this submission the question of excessive design standards is raised and the lack of transparency about those standards and the consequent capacity

of assets.

Consideration of this question raised the issue of what advantage SWC may get in the process, particularly in terms of the increased rate of return to SWC. This may be only one consequence of poor design standards.

In summary there are more questions than answers with the RAB.

B. IPaRT Report

The report summarises the decisions made by IPaRT. Comments on those decisions are provided as follows.

Review/Revision of List of IPART's Draft Decisions

(Comments by PP in blue)

The fundamental concepts sought by the industry are:

1. *The charges to be calculated as a comparison of capacity and demand. Demand is based upon the takeup in ETs for the 30 year period in the NPV Model. The demand is met at a cost of asset capacity, which is the equivalent share of the ET capacity of the system.*
2. *The calculation has 3 stages:*
 - .1 *Determine the ET demand from population, land and building projection data for residential and non-residential uses.*
 - .2 *Determine the asset costs to meet that ET demand as a share of the system cost based upon capacity. Only major assets will however have defined capacity. Minor assets will have a capacity assumed to meet the total demand for the takeup in the DSP period (ie 30 years or less).*
 - .3 *Determine the PV of net revenue to be discounted, based upon financial data.*
3. *The net PV cost per ET (which includes interest at 3% or 7%) is the charge.*

The draft decisions made by IPART *and amended by way of comment* are:

1. Assets that will be more than 30 years old at the date of review of a DSP or the introduction of a new DSP must be excluded from the capital charge. *Agree that the 'line in the sand' should be moved in order to maintain the original principles.*
2. Only future assets to be constructed within five years of the commencement of a DSP are to be included in the capital charge (*Agree*). In order to gain an exemption from this five year rule, metro water authority ('MWA') must demonstrate to the satisfaction of IPART that there is a clear nexus between the

future assets concerned and the development in question and provide detailed plans that establish that the assets will be built as and when forecast. *The MWA should also demonstrate that the additional capacity is required to upgrade the asset group it is part of and to what extent within the DSP planning period. (ie: will it serve ETs to the end of the DSP planning period or will it be less or will there be a surplus).*

3. The valuation method to be applied to all existing assets in developer charges calculations is to be actual cost adjusted by changes in CPI. *Existing MEERA values of pre 1996 assets* at 30 June 2005 or the actual costs for assets commissioned since 1996 are to be adopted as the starting point. *Water authorities have had good asset data since 1996 which should be used to minimise the clearly identified impact of MEERA rates.*

The industry objection to MEERA which replaced the agreed MEA (modern equivalent asset), is that it departed from the concept of cost to provide an asset in various locations, to a generic rate which had a myriad of extras which may or may not apply in reality. The extras were more about problems in existing areas rather than greenfield areas where the charges were the highest.

4. A specific reference to land assets will be included under the general definition of assets in the Determination. Valuation of land assets will follow a similar procedure to other assets.
5. The reduction amount is required to prevent double dipping. If the reduction amount mechanism is removed (and not replaced with a similar mechanism), new entrants would be charged twice for the use of assets through developer charges and periodic charges.
6. To maximise transparency and simplicity, average water authority wide *operating revenues and costs as contained in annual accounts and financial projections are to be used in the developer charges calculation for the purpose of calculating the reduction amount for ALL DSP charges.*

This may exclude operating costs that have been contracted out under a Public Private Partnership, Build-Own-Operate or Build-Own-Operate-Transfer arrangement which are not attributable to the development. *Therefore where these systems costs are included, the authority wide reduction amount will apply.*

7. *The concepts of takeup, capacity need to be understood as two overlapping streams of ETs. One is the takeup in ETs to the end of the DSP period. This is determined from demographic projections and commercial and industrial development projections. Assumed demand is applied to each to calculate the total demand in ETs.*

The second is the combined capacity of types of major assets designed, in principle to meet the takeup demand. The means of inclusion of capacity of major assets type groups, and the apportionment of their cost can only be achieved by aggregation of their capacity and cost.

The combined capacity may approximate the demand at the end date of the DSP (Asset Group 1), or may not because of surplus capacity (Asset Group 2) or limited capacity (Asset Group 3). Surplus capacity and its cost should be subtracted from the CAPEX. Where there is limited capacity the period the NPV model at a discount rate (interest) is applied to the date when the capacity is reached.

The attached DSP Model Concepts spreadsheet illustrates the approach as follows:

Where the takeup to the end of DSP is 20,000 ET and the pre DSP ETs are 10,000 ETs, 50% of the cost of minor assets groups will be included in the NPV model.

If the major asset group's capacity will reach the end of the 30 yr DSP, the same 50% of the group cost will apply.

If the capacity is reached half way in the DSP period (at 15,000 ETs) then the model will apportion 25% of the cost over 15 years in a 15 year NPV model calculation.

If the capacity of the major asset group is 30,000 ETs then the cost included in the 30 yr NPV will be 33.33% (10,000ET/30,000ET). Excluded proportion of the cost will be 10,000ETs for existing assets and 10,000ETs for the surplus.

This has been the concept used by the DEUS Guidelines which the industry accepted as a principle, as the agreed interpretation of the 1995 IPaRT Determination!!

Note: The above principle takes no account of BASIX, which must be taken into account. As BASIX applied from 2004, a threshold of 2005 for application of the revised capacity for all assets. That is the capacity of major asset groups applied or used, will be assessed at preBASIX demand up to 1 July 2005 and post BASIX demand after that date.

8. The number of ETs to be included in calculations is calculated as follows:
 - an ET is defined as the average annual demand of a single detached dwelling ;
 - the total average annual demand in ETs must be used when calculating developer charges. As illustrated above, the NPV model, in principle will calculate a charge for a proportion of the capacity that serves the takeup within the 30 year planning period. This may be subject to some adjustment if there is limited or surplus capacity.
 - water authorities are required to calculate the ET rating of all the development types, including non-residential, according to their average annual demand compared to that of a single detached dwelling.
9. A consumption or flow-based process for allocating ETs is to be adopted. IPART requests that water authorities forward proposals to establish the principles for such a system so that they can be incorporated into the final determination.
10. DSP boundaries should be consistent with **nexus and catchment** boundaries of water, wastewater and stormwater systems.
11. IPaRT accepts the SWC proposal, as an example, to amalgamate DSPs on the basis of demonstrable nexus.

However any further amalgamation by the authority must be by agglomeration as follows:

- the MWA must weight the charge for an agglomerated DSP area by the present value of ETs in each existing DSP area subject to agglomeration.

- the WA can only agglomerate those DSP areas where the difference in the developer charges of the DSP areas subject to agglomeration is less than or equal to 30 per cent of the lowest charge.
 - can only agglomerate DSP areas that share a common boundary.
12. Metro water authorities may publish and exhibit draft DSPs on a rolling basis when they review their DSPs as part of the 5 year review process. The implementation date for all charges reviewed during the financial year will be 1 July of the financial year following.
 13. Water authorities must commence a review of all their existing Development Servicing Plans from the Commencement Date and conclude their review by no later than 30 June 2011 **2009**.
Thereafter:
 - i. Water authorities:
 - a. must review their Development Servicing Plans and Developer Charges at least once in each five year period from 1 July **2009** with any additional review in that five year period requiring the prior approval of IPART; and
 - b. must review their Developer Charges when and to the extent required by any IPART determination.
 - ii. In any year where there is no review of Developer Chargers as required under i above, the Developer Charges then prevailing must be multiplied on 1 July in each of such years by the number derived from the application of the ÄCPI.
 14. IPART requires water authorities to enunciate in their DSPs, in a transparent manner, the processes they have adopted to account for the requirements of the BASIX scheme in the calculation of developer charges.
 15. Water authorities must show the methodology used and the resultant calculations made to apportion the costs of growth capital expenditure, compared to other capital expenditure drivers, for headworks assets in their DSPs.
 16. IPART will establish a Technical Panel comprised of members of the development industry and water authorities and chaired by IPART. An

important objective for the Panel is to help to address developers' concerns about inconsistencies in water authorities' interpretations of the methodology. The Panel will exist as an advisory body only, and will not be able to produce binding guidelines of its own, but can make recommendations to IPART. The Panel will deal with issues of a broad policy nature and not issues related solely to individual developments. *This should not preclude a particular problem being used to assist in resolving a principle with wide application.* Developers will retain the right to have disputes settled under section 31 of the IPART Act.

17. The determination will be amended to clarify that the dispute resolution process provided for under section 31 can be invoked at any time.
18. Wording in the determination regarding the identification of assets as either pre- or post- 1996 will be amended to reflect a 1 July 1996 cut-off date for that identification.
19. When performing calculations:
 - For pre-1996 assets:
 - a. Sydney Water and Hunter Water must use a real discount rate of 3 per cent.
 - b. Gosford Council and Wyong Council must use a real discount rate of 0 per cent.
 - For post-1996 assets:
 - a. All water authorities must use a real discount rate equal to the authority's WACC used from time to time by IPART when calculating periodic charges for post-1996 assets.
 - For the revenue portion and the operating expenditure portion of the reduction amount:
 - a. All water authorities must use a real discount rate equal to the authority's WACC used from time to time by IPART when calculating periodic charges.
20. Water authorities, when conducting reviews of DSPs, are required to use the average residential consumption figure used in the periodic charges determination current at that time or as determined by IPART if not set out in the determination. The figure should not be based on data arising from anomalous circumstances such as the imposition of water restrictions. This figure is to be

expressed as the consumption per ET.

21. Water authorities must have regard to the latest demographic statistics published by the NSW Department of Planning *and the Australian Bureau of Statistics (ABS providing historical data and 20 year projections, and the DoP providing 30 year projections)*. Water authorities must provide reasoning in their DSPs for any divergence from the latest demographic statistics published by the NSW Department of Planning.
22. The 85 per cent cap on Wyong Council's developer charges is to be phased out *if the Council can demonstrate that their assessment of takeup is properly based upon demographic analysis together with a soundly based equivalent tenement assessment including residential and non-residential development based upon assessed average annual demand.*
23. IPART will discuss with Wyong Council if there are means that can be adopted that will assist Wyong Council in minimising the impact of Wyong Council's stormwater capital expenditure on the level of developer charges.
24. Preliminary developer charges may be levied by water authorities providing that:
 - they are calculated in line with the principles in the determination and
 - depending on whether the preliminary charge is greater than or less than the adopted charge, the water authority must either recover from or refund to the developer the difference between the preliminary and adopted charges.
25. The 2006 Recycled Water Charges Determination determined by IPART in September 2006 will continue to apply.

Note: The industry objects to the recycled water charges on a number of grounds. These include:

 - .1 The charges discriminate against new home owners in favour of an environmental benefit to the whole community;*
 - .2 The charges clearly do not take into account the offsets anticipated by the IPaRT Determination. If no allowance for either BASIX or recycled water was made in the charge for potable water and SWC has stated that there is a 40% saving in potable water, why NO OFFSET!*
 - 3. In the long term all recycled water programs will be judged, rightly, as a waste of a valuable resource and as in many other countries, the water will be recycled back through the potable system either indirectly or*

directly. It seems that this 'elephant in the room' is ignored as it is seen as a threat to the illogical and inefficient Desalination Plant.

26. IPART invites comments from stakeholders on the most appropriate way of partitioning growth assets and revenues and will consider the options discussed and other possible solutions in time for the next round of periodic charges determinations.

Part C

Review of the Report for Metro Charges from 1 July 2009

By P Price
17 August 2008

Introduction

As previously indicated it is proposed to discuss the issues raised by IPaRT, in three parts which include:

- A.** A review of the issues of principle and the preferred outcome.
 - B.** The Report
- (These parts are included in the another document marked A & B)

This document considers:

- C.** The Draft Determination

C. Draft Determination

Preliminary Observations

In Part A I considered a number of principles.

I also provided discussion on the Report in Part B which included the List of Decisions, which also outlined the principles adopted.

The Draft Determination should also include a list of principles which provide the basis of the Determination. My main reason for this request is, I can see that the sense has been lost in the repetition of words for each category of asset. A statement of principles would provide a cohesive beginning.

Another major problem is the 1996 threshold has been incorrectly used. It is no more than the date when the discount rate changes. It has no other part to play in the calculations as suggested, and never has. The SWC 2006 DSPs accepted this point and pre 2006 dates were excluded from the NPV model. The Hunter Water Model continues to include 2006 Values at 1996. There are only two possible interpretation of the badly worded 2000 Determination for a 2006 DSP.

- Either 1996 Existing Asset Values could be included at 1996, the Model could NPV back to 1996 and the capital charge could then be CPI'd up to 2006.

The problem from here is how to include Assets commissioned between 1996 and

2006. The solution is as complicated as for pre 1996 assets.

This approach is confusing and was never intended in all the sessions with IPaRT I had preparing models to test various options.

- The preferred method is to include all existing assets in a 2006 DSP NPV model at 2006 values at 2006. Pre 1996 Assets then have their takeup discounted at 3%. Post 1996 Assets have their takeup discounted at 7%.

Contrary to the formula on page 7 of the Draft Determination, none of the pre 2006 assets would be discounted. Logically these assets are valued at 1996 and therefore retain their value. Only the takeup is discounted to apportion the cost.

Future assets have both the capital cost and takeup discounted.

Consequently it seem the formula on page 7 needs to be revised in my view.

I would also suggest the use of other words to classify the various asset types. Some of the words have different connotations than might be used for water and sewerage assets.

Critically the term capacity is not defined.

Further the NPV period 'n' is not defined in the 6 parts of Section 4 of Schedule 1. Parts of the text suggest that the NPV calculation goes for 30 years plus the period back to 1996. This is fundamentally wrong as it would give a PV of the asset in 1995 based upon 2006 value which is clearly nonsense.

Further the value of 'n' could be less than 30 years if the asset group capacity runs out in less than 30 years. This is recognised in the definitions but it needs to be better spelt out.

On Page 47 the proposed net revenue calculation system of calculation is vague and open to abuse. Net Revenue must include the difference between all revenue and expenses excluding:

- Developer charges and assets as income
- Depreciation expense
- Purchase of Water from SCA expense
- Interest Expenses

Attached is an EDITED MS Word version of the Draft Determination text, where the text has been varied and tracked to provide a clearer basis to comment on the words and substance of the document.

The general intent of Draft is agreeable and is more or less as expected in discussions with SWC. These include:

- maintain the Guideline principles (ie 1995 and 2000);
- adopt average demand (ie exclude peak demand);
- allow amalgamation for areas with good nexus;
- allow a single authority jurisdiction wide net revenue amount;
- require apportionment by capacity;
- improve transparency and accountability;
- facilitate two staged charges for industrial and commercial developments;
- phased release of the DSPs to provide a proper time frame for their review.

Determination Schedules

The problems with the Schedules are numerous because of un-necessary ideas which have been introduced that do not adhere to a proper application of NPV principles and the time and value of money. It is accordingly more complicated than necessary.

In addition the capacity question has been mis-understood. Capacity analysis for major assets is not a matter of examining each asset separately. Capacity to meet demand by particular asset groups can only be assessed on a group of like assets together. For example there may be 5 reservoirs in an area of various sizes with differing capacity but only the combined cost and the combined capacity need be examined.

The following notes for Schedules 1 and 2 need to be read in conjunction with the other documents provided (A and B plus the annotated Draft Determination).

Schedule 1

This schedule claims it contains some of the general principles. In fact it principally provides methodology, which is insufficient. In particular the formula on page 7 is somewhat indecipherable and appear to contain some errors.

The attached EDITED Draft principally reviews Schedules 1.

Firstly it edits the classifications in Clause 3.

The current ones are inadequate and leave it open to the agencies to merely ignore the requirement to used capacity data for major assets. It is understood that agencies are resisting this and there are a number of apparent reasons for this.

It is NOT that they don't have the data as this suggests there is no design criteria when the assets were constructed in the first place. One obvious reason for the reticence, is that SWC for example doesn't want their 30+ year old design standards challenged.

It is also likely that SWC take considerable advantage from the excessive cost which poor design standards support and in turn inflate their rate of return from the RAB.

Secondly Clause 4, Charges for Development Services.

This clause is amended by adding the 4 basic steps to be followed. These are the essential principles to be followed.

The formulas are wrong in principle. Further the algorithms do not appear to achieve the correct NPV values.

The most obvious problem is that the Draft is too repetitive which is unnecessary as many of the elements are the same in principle. The summary of the 6 capital charges formulas show that the first 4 are the same and the last 2 are the same.

In general the amendments reinforce what are the principles adopted in 1995.

It also ensures that the NPV algorithm is not misunderstood as currently occurs.

The more descriptive formula for the 6 elements of the capital charge illustrate the straight forward methodology which is lost in the complex and error ridden formulas in the Draft.

Amalgamation and Agglomeration - Clause 7.4

In this Clause I have added a distinction between amalgamate and agglomerate. The amalgamation is a nexus based approach. The agglomeration is a mathematical consideration.

Both have their place. However the industry support the current SWC approach to amalgamate based upon nexus.

Agglomeration is less desirable and the requirement for a common boundary means that some nexus may still be demonstrable. A mathematical has in my experience in regional NSW not been applied with much logic and is therefore to be avoided if possible.

Schedule 2

The more detailed requirements are included here. There are three issues in

Clause 2:

1. MEERA - There is no logical reason to hold MEERA at 2005. It assumes for post 1996 that new asset cost data is not available. This is unlikely as RAB relies upon having historical data. It would be inefficient not to have such data.

The approach to revaluing land is acceptable.

2. Date of Valuation - This is left vague and should be specified as being at DSP Review Date.
3. Apportionment - The Draft misunderstands that the assets costs are not discounted but the cost is apportioned over the PV of the capacity take up in ETs. That is only the take up is discounted.

Similarly the calculation methodology in Clause 3 is incorrect. As indicated in the submission B, the prorata share of the cost is what is included in the DSP. That is apportionment as mentioned above. The period of apportionment may be 30 years or less depending upon the asset group capacity.

Summary

The various accompanying documents which examine the Report and Draft Determination, reveal that the Draft Determination is far more complex than necessary which is the result of mis-understanding the basic system, demand and financial concepts.

One of the contradictions is that despite the complexity, there is little prescription in regard to capacity for example which will hold agencies to account. Whether they know (ie the capacity) or don't know is a Rumsfeldian question. If they don't choose to know, how do we know they don't know.

It is hoped that by agreement on the basic principles, a far less complex but a more authoritative Determination can be devised.

PM Price
17 Aug 08