



1 August 2006

Reference: HW2006-109

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Mr Jim Cox
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Dear Mr Cox

Jim

PRICING ARRANGMENTS FOR RECYCLED WATER AND SEWER MINING: DRAFT DETERMINATION

I have reviewed the draft determination and broadly agree with the determination for recycled water developer charges and the pricing guidelines for mandated and voluntary recycling schemes set out in the accompanying report.

Overall, I believe that the guidelines will be an important step forward in development of the growing recycled water product line. Detailed comments on specific aspects of the determination and the report are attached.

I have not made comments on the determination for Rouse Hill pricing, largely because commentary on this determination is a matter for Sydney Water Corporation. I note, however, that the Tribunal has linked, albeit loosely, the recycled water usage price to the potable water price at the end of the price path. While I realise that this provides a benchmark for the recycled water price, I believe this linkage may set a precedent that influences future community expectations about the level of recycled water prices for residential schemes. This ultimately may lead to a de facto postage stamp pricing arrangement for recycled water.

Such a precedent potentially detracts from the flexibility offered by the guidelines for price setting for mandated schemes, as set out in section 7 of the draft report. Usage prices linked arbitrarily to the potable water usage price reduce the flexibility to appropriately balance developer charges and periodic charges in the light of the capital and operating costs of the scheme in question and in the light of the costs of alternative demand management options, such as rainwater tanks. Clearly, from the discussion in the report, this is not the intent of the guidelines.

In a similar context, I note that section 6.2 of the developer charges determination requires that operating revenues for the operating surplus/deficit calculation be based on uniform residential recycled water charges across the whole area of operations. It is not clear why this postage stamp pricing approach is being advanced for the calculation of developer charges when the guidelines offer flexibility in setting periodic charges. Such an approach means that, as for water and sewer prices, differences in capital and operating costs from one scheme to another will only be reflected in developer charges and not in periodic charges.

As always, I am happy to discuss these matters further with you. If your officers require further clarification of the Corporation's response to the draft determination and report, they should contact John O'Hearn, General Manager, Strategy and Communications on 02 49799748.

Yours sincerely

A handwritten signature in black ink, appearing to read 'K. Young', is written over a circular stamp or seal.

KEVIN YOUNG
Managing Director

Hunter Water Corporation Comments on Draft Recycled Water Price Determination and Report

1. Comments on Draft Determination No 8

Schedule 1

Application of the determination: It is not clear from the determination and Chapter 5 of the report what the boundaries are for application of the determination. Given the similarity with the current developer charge determinations and the Schedule 3 requirements, it appears to be applicable to urban residential, commercial and industrial situations. Also given the discussion in the report, it would appear to be discretionary to apply the determination to "voluntary" customers. As many commercial and industrial customers will be voluntary customers, it is not clear what the legal requirement to apply or not apply the determination will be (eg will it just apply to developments with mandatory customers). It may be beneficial to clarify the application of the determination in the final determination and report.

3.3 Apportionment of assets: For consistency with the expression in s2, "CC" for capital charge in s3.3 may be better expressed as K_i where $i = 1$ or 2 .

4.3 Capital charges commissioned on or after the commencement date: s4.2 covers pre-1996 assets, s4.3 covers post-1996 assets constructed on or after 1 October 2006 (commencement date) and s4.4 covers yet to be commissioned assets, which also logically fall after the commencement date. This grouping appears to exclude assets constructed between 1996 and 1 October 2006. It would seem s4.3 should relate to post-1996 assets commissioned "on or before" the commencement date.

6.2 Projection of Operating Revenues: This section states that the agency must assume that residential charges are uniform across the water agency area for the purposes of calculating the operating surplus/deficit. This requirement would effectively result in any variation in the direct costs (capital and operating) from one scheme to another being recovered only by variations to developer charges.

While variations in developer charges only are consistent with the Tribunal's intention, as stated in section 4.3 of the report, that the direct costs of recycled water schemes should be recovered on a scheme-by-scheme basis from the users of the scheme, it does mean that the cost variations are met only by those who pay developer charges – that is, the first owners. It also seems to be a de facto way of achieving postage stamp periodic charges, which does not seem to be the Tribunal's intent from the discussion in 4.3 and the guidelines set out in section 7.

It is also questionable whether using uniform charge across the water agency area will result in operating revenues that best meet the "needs of users, including developers" as required in s6.3 of the Schedule.

Hunter Water believes it would be preferable for s6.2 to be worded similarly to point 6 of the guidelines in Box 7.1, which limits annual charges to being no greater than the potable water price and at a level capable of sending appropriate consumption signals.

Schedule 2

Hunter Water agrees that the parameters as specified in section 2 of the Schedule are appropriate to Hunter Water.

Linking the discount rate to the real pre-tax rate of return in the current periodic charges report may result in a change to the discount rate at the next periodic charges determination. Does a change in the rate of return at periodic price review automatically trigger a review of recycled water developer charges? The relationship between rates of return established in periodic price reviews and the resultant need for a review of developer charges could be covered in s9.2 of the determination.

2. Comments on Draft Reports Nos 8 and 9, 2006

2.4.2 Hunter Water

This section incorrectly quotes Hunter Water's Integrated Water Resource Plan (2003) as setting a target of recycling 17% of dry weather effluent flows by 2007. The IWRP sets a target of 13%¹.

3.4.3 How should the costs of recycled water schemes be recovered?

Hunter Water supports the concept that the starting point for setting prices should be that the direct incremental costs of each recycled water scheme should be recovered from the users of that scheme. The Corporation also agrees that there may be instances where the benefits of a recycled water scheme may extend beyond the direct users of the recycled water scheme. In such cases, and where the costs of providing these wider benefits can be apportioned and quantified, it is appropriate for some costs to be recovered from parties other than the direct beneficiaries. The Corporation supports this concept and principles 4 and 5 in section 3.5 and notes that the later guidelines for cost recovery build on this concept and these principles.

4.1 Establishing an integrated water resource planning framework

Hunter Water is taking a strong strategic planning approach to recycling by thoroughly examining what prerequisite conditions are already in place to increase recycling. The Corporation is critically examining its recycled water sources, potential customer demands and possibilities for enhancing supplies by strategic investment in measures such as enhanced treatment, reticulated supply of treated effluent and linking of recycled water sources to provide economies of scale in the volumes available to supply. This comprehensive and detailed recycled water strategy will inform the Corporation's next integrated water resource plan to be developed in 2007.

While Hunter Water strongly supports and endorses the concept of integrated water resource planning, it is not clear how the Tribunal intends such plans to be used as a means of assessing the costs and benefits of recycled water projects. There are two ways such plans can be used. On one hand, they can be used prescriptively such that all prospective recycling projects are included in the plan with costs and benefits identified up front at the planning stage or they can be used to provide reference costs and benefits against which emerging projects can be assessed during the life of the plan.

As has been identified throughout the Tribunal's review, recycling is in its infancy and is emerging in various ways, sometimes rapidly, as a viable means of water supply augmentation. In this environment, the reality of the development of many recycling projects is that they are often opportunistic and demand driven rather than being the products of detailed forward planning. Often recycling projects arise because new

¹ Hunter Water Corporation, 2003, *Integrated Water Resource Plan*, Newcastle, March, pages 15 and 57.

unforeseen opportunities emerge – eg because of new industrial enterprises, changes in residential development uptake, new treatment technology etc.

The fact that not all recycling projects are identified in advance through an integrated plan should not preclude other new recycling projects being developed if they were not included in the last iteration of the integrated plan.

Integrated planning screening tools like levelised cost together with sequencing option assessment basis of minimising average incremental cost over a defined planning horizon can serve as benchmarks for assessing opportunistic projects as they arise. The average incremental cost of the preferred options covered by the integrated plan can also serve as the base “without” case for establishing avoided cost offsets in price setting of individual schemes. The “with” scheme avoided costs would to be assessed against how it alters the timing and cost profile of the preferred set. However, the important point is that this can be done using the information from an integrated resource plan and hence does not require that all prospective recycling schemes actually be considered in the plan.

Hunter Water believes that, while it is optimal for all prospective recycling schemes to be considered as options for an integrated plan, it is not practical to always do so. The discussion of integrated resource planning should make it clear that recycling schemes do not have to be included in the least-cost suite of options up front to be eligible for the Tribunal to assess whether avoided costs can be recovered from the water or sewer customer base. However, to be eligible, recycling projects would have to be deliverable for the same, or lower, incremental costs than projects already in the least-cost suite covered by the plan.

4.3.1 User Demand

While section 8.3 does clarify that avoided costs can be taken into account (under specific conditions) for voluntary recycled water customers, this section implies that all direct costs should be recovered from the direct beneficiaries of the recycling scheme only. Hunter Water believes that voluntary, or discretionary, customers have potential to use significant quantities of recycled water and, as a result, offer significant scope for avoiding future costs elsewhere in the water supply or sewer system. This is particularly the case with large industrial users, when recycled water is used to substitute for existing or future potable water use. It would be appropriate to acknowledge the potential for large avoided costs in such cases, and that they are allowed as offsets, at this section.

7.4 Compliance with recycled water pricing guidelines for mandated schemes

Hunter Water supports the pricing guidelines for mandated schemes. The Corporation notes that the Tribunal intends to seek amendments to legislation to allow it to set enforceable guidelines in addition to powers to set actual prices or a methodology.

It would seem that there is a fine distinction between “enforceable guidelines” and a “methodology”, as defined by s14A of the IPART Act. The main difference would appear to relate to the application of s18 regarding the use of a methodology to set a maximum price only, which is more restrictive than the flexibility offered by the proposed guidelines. It would be appropriate to include further clarification of the distinction between enforceable guidelines and a methodology in this discussion in the report.

Box 7.1 Draft Pricing Guidelines for Mandated Recycled Water Schemes

Hunter Water supports and agrees with the guidelines set out in Box 7.1.

Two minor points of clarification would be useful. The condition in point 6 relating to recycled water demand exceeding supply more than "10% of the time" is open to various interpretations. Cost-effective recycled water treatment and distribution systems that permit supply of recycled water for a reasonable price may justify, say, 20% or more potable top up on summer peak demand days. However, because these days are relatively few in number, overall annual top up in volume terms may still be well less than, say, 5%, of total volume supplied through the recycled water scheme. Hunter Water believes this condition should be more precisely defined to be "more than 10% of total annual volume supplied" rather than "10% of the time".

Some confusion may arise because of the different terminology used in quotation marks in points 2, 3 and 10. Points 2 and 3 label the result of formula B as the "cost offset" whereas the offset appears to be labelled as the "deduction amount" in point 10. Hunter Water believes these terms should be labelled consistently.

Point 13 requires that costs and revenues from recycled water schemes be ring fenced from the regulated business. As far as capital investment and asset values are concerned ringfencing would present no issues. Similarly for discrete recycled water facilities (eg recycled water distribution mains), operating costs can readily be isolated. However, in some cases, separation of operating costs may require cost apportionment, if all the operating costs of the recycling scheme are to be ring fenced. This is most likely to apply to wastewater treatment plant operating costs because any additional treatment for recycling (above discharge requirements) generally will be integrated with existing treatment facilities. This would mainly affect inputs such as electricity, chemical use and operator labour.

8.3 Tribunal's proposed high-level pricing principles for voluntary recycled water customers

As noted above in the comments on s4.3.1, the benefits (and hence, avoided costs) as a result of voluntary customer use of recycled water may be quite significant. The second and third dot points in s8.3 provide guidance for taking account of avoided costs in setting prices for voluntary customers. Acknowledgement that avoided costs can be considered in pricing arrangements for voluntary customers would be appropriate at s4.3.1.

9.2 Tribunal's proposed approach for sewer mining

Hunter Water notes the Tribunal's comments that "incumbent water agencies have the ability (and in some cases a potential incentive) to frustrate or prevent sewer mining proposals".

In considering sewer mining proposals, incumbent agencies do have a responsibility to consider a range of their own operational and liability issues, which may be interpreted as frustrations by sewer mining proponents. Agencies need to ensure that sewer mining operations do not adversely affect the operations of their sewerage system (eg by depleting sewer cleansing flows, destabilising treatment plant loadings, creating unpredictability in treatment plant inflows etc). Further, incumbent agencies are not the only parties with legitimate interests in sewer mining proposal – the interests of others such as local communities and neighbours, insurance providers and local government (in terms of planning requirements) need to be taken into account and dealing with these matters may well be complex and frustrating to proponents. Ultimately, the interests of these third parties may prevent some sewer mining proposals from proceeding and, in this context, it should be acknowledged that incumbent agencies do not always have the whole, or final, say on sewer mining proposals.

Appendix C Guidelines for the calculation and treatment of avoided and deferred costs of recycled water

Hunter Water broadly agrees with the guidelines outlined in this appendix.

It is agreed that growth-related avoided costs should be met by developer charges. When expenditure on recycling also avoids planned expenditure that otherwise would be met by the agency's existing customers (eg the avoided costs of additional wastewater treatment to meet higher standards), these costs should be recovered through periodic charges.

However, when costs are to be recovered by periodic charges, it is not clear that it will always be appropriate for both avoided capital costs and avoided operating costs to be recovered by adjustments to the regulatory asset base (RAB) as outlined in the section on treatment of avoided costs for Example 1. Hunter Water's reservation is explained further using the wastewater case study of Example 1.

From a theoretical standpoint, only avoided capital costs should be recovered by incorporation in the wastewater RAB while avoided operating costs should be allocated to wastewater operating costs. Recovering operating costs via an RAB adjustment only returns a portion of these costs in the year they are outlaid.

However, it is acknowledged that the proposed approach of adding the present value of both avoided wastewater capital costs and operating costs into the RAB has appeal due to the administrative simplicity it offers. It makes the treatment of avoided costs a once-off adjustment and so avoids the need to apportion the recycled water scheme's operating costs between the recycled water scheme and wastewater operating costs at each price review.

This approach may have merit while ever the present value of wastewater avoided costs (both operating and capital) are relatively small in comparison the recycled water scheme's costs, as is the case in Example 1. However, it is not clear that it is appropriate if the avoided costs account for a much larger proportion, as in Example 1A below.

		Example 1 PV (From Appendix C, Table 2)	Example 1A PV
	Direct costs of recycled water scheme	<i>\$'000</i>	<i>\$'000</i>
A	Recycled water scheme capex	45,869	45,869
B	Recycled water scheme opex	9,839	9,839
C	Total relevant cash flows	56,708	56,708
D	PV of avoided costs to be recovered from wastewater customers	9,236	46,000^a
E	% of total costs of recycling scheme	16.58%	81.1%
F	PV of costs to be recovered from recycled water customers	46,472	10,708
G	% of total costs to be recovered from recycling scheme	83.42%	18.9%

In example 1A above, the present value of the total avoided costs to be recovered from wastewater customers is \$46m or 81% of the total PV of the recycled water scheme (rows D & E). Assuming it comprises \$40m as PV of capex and \$6m as PV of opex, some 61% (\$6m/\$9.839m) of the recycled water scheme operating costs

would be recovered through depreciation and rate of return rather than directly in the year of outlay.

Such an arrangement would possibly result in very low periodic prices for the recycled water schemes and not send the appropriate signals as required by Point 6 of the Guidelines in Box 7.1

Further, some prospective residential recycling schemes (along the lines of that in Example 1) that may eventuate in Hunter Water's area are likely to be relatively small. As a result, the avoided costs (of treatment plant upgrades to meet licences standards) may be a significant proportion the prospective recycled water scheme costs.

With regard to Example 2, if the switch from potable to recycled water by a large user will result in a deferral of capital spending in the water system, the deferred investment generally would be reflected as a saving in expenditure to meet growth in water demand. In such a case, the capital component should be met through water system developer charges. If any deferral benefits of water supply operating costs are taken into account in setting the recycled water prices, these costs should be taken into account by IPART as a specific water system cost item at the next periodic price review. Cost and revenue ringfencing procedures and the Annual Information Return need to make provision for these offsets to be recorded and reported to IPART.