



Independent Pricing and Regulatory Tribunal

Review of Water Supply, Sewerage and Stormwater Developer Charges Guidelines

Water — Final Report to the Minister
September 2007



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1 Introduction and overview

Developer charges are up-front charges that water authorities levy on land developers to recover some of the costs of providing water-related infrastructure to new developments. In NSW, the developer charges levied by the four major metropolitan water authorities (Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council) are regulated by the Independent Pricing and Regulatory Tribunal (IPART). IPART has established a methodology that these water authorities are required to use to calculate the charges applicable for a particular development.

The developer charges levied by the non-metropolitan water authorities in the state (referred to in this report Local Water Authorities or LWAs) are regulated through the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (the Guidelines). These Guidelines were issued in December 2002 by the then Department of Energy Utilities and Sustainability (now the Department of Water and Energy, or DWE). They are intended to ensure that a consistent approach to calculating developer charges is used throughout NSW, while recognising and accommodating the wide variation in the local conditions LWAs face.¹

The Guidelines provide an approach for calculating the maximum applicable developer charge.² This is based on the net present value (NPV) approach adopted by IPART for the four metropolitan water utilities. NPV is a standard tool for making investment decisions and is widely accepted and understood. The fundamental principle of the NPV approach is that the investment in assets for serving a development area is fully recovered from the development, through a combination of up-front charges (the developer charges) and periodic charges. The NPV approach allows future costs and revenues to be reconciled to a single value by discounting them to today's dollars. It also takes account of the upfront infrastructure costs related to a development, the ongoing costs of servicing the development and the additional revenues from periodic charges as the number of customers being serviced by an LWA increases.

¹ The more than 100 LWAs in NSW face a wide variety of local hydrologic, geographic and demographic conditions. Some service a great many small villages across large areas, while others service relatively large urban centres. Some service communities in economic decline, while others service regional centres or rapidly growing coastal towns.

² A detailed explanation of the Guidelines is provided in Appendix D.

The Guidelines, however, have simplified the IPART approach to make it suitable for use by LWAs, many of whom have access to more limited data for calculating developer charges than the metropolitan water authorities. It is also more flexible than the IPART methodology. For example, LWAs have a choice of methods for calculating their developer charges, and can choose to charge less than the maximum charge allowed under the Guidelines. They can also choose to establish a combination of developer charges and periodic charges that best reflect their community's needs, including socio-economic factors, development objectives and revenue needs.

The Guidelines have been in place for nearly five years. In this time, the LWAs have gained experience in using them to set their developer charges. Many have also improved their management practices, and so now have access to better data than they did when the Guidelines were developed. In addition, the development industry has expressed some concerns about the Guidelines and the way LWAs are applying them. In particular, the industry has put the view that the Guidelines have been simplified too much (compared to the IPART methodology), and this is leading to perverse outcomes.

Given the above, the Premier has asked IPART to review the Guidelines and "provide recommendations for any improvements" to the Minister for Water Utilities by 30 September 2007.³ This timing will enable the Minister to consider the recommendations, and potentially make changes to the Guidelines prior to the five-yearly review of the LWAs' charges, scheduled for July 2009.

1.1 Overview of the review process

IPART has completed its review, which involved extensive consultation with a wide range of stakeholders - including the Government, LWAs and the development industry. As part of its consultation process, IPART issued an issues paper, and received written submissions from 18 interested parties. (A list of those who made submissions is provided in Box 1.1, and the views expressed in these submissions are summarised in Appendix B.)

IPART also held public workshops in Nowra and Port Macquarie in June 2007, to provide stakeholders with further opportunities to express their views. (Transcripts of these workshops are available on the IPART website)⁴. Both workshops were well attended by key stakeholders, with representatives from DWE, LWAs and the development industry making valuable contributions to the discussion.

³ A copy of the terms of reference for this review can be found in Appendix E.

⁴ The following weblink can be used to obtain copies of the transcripts, http://www.ipart.nsw.gov.au/investigation_content.asp?industry=3§or=7&inquiry=118

Next, IPART considered all the views expressed by stakeholders, and undertook its own examination of the current Guidelines, and the broad objectives for regulating developer charges. Based on these considerations, IPART prepared a series of preliminary recommendations and circulated them among representatives of DWE, LWAs and the development industry.⁵ These representatives provided detailed comments on the preliminary recommendations to IPART, which it considered before formulating its final recommendations.

Box 1.1 Stakeholders who made submissions

IPART received written submissions from a wide range of stakeholders, including:

- ▼ Department of Water and Energy (DWE)
 - ▼ Water Directorate Incorporated
 - ▼ Seven LWAs:
 - Port Macquarie-Hastings Council
 - MidCoast Water
 - Shoalhaven City Council
 - Clarence Valley Council
 - Albury City Council
 - Ballina Shire Council
 - Tweed Shire Council
 - ▼ Development industry representatives
 - Economic Planning Advocacy
 - Housing Industry Association
 - Urban Development Institute of Australia
 - ▼ Association of Consulting Surveyors
 - ▼ Hunter Water Australia
 - ▼ Engineering/surveying/development consultants
 - Green Ingenuity
 - RPS Harper Somers O’Sullivan
 - Ross Fraser Consulting
 - ▼ The Energy and Water Ombudsman of NSW (EWON)
-

⁵ Representatives from the following LWAs responded to the draft recommendations: Water Directorate, Shoalhaven City Council, Port Macquarie-Hastings Council, MidCoast Water, North Coast Water/Clarence Valley Council, Eurobodallah Shire Council, Albury City Council, Coffs Harbour Water.

1.2 Overview of IPART's approach and key findings

In reviewing the current Guidelines and recommending improvements to them, IPART identified a set of broad objectives that developer charges should aim to achieve. These objectives include:

- ▼ **Full cost recovery:** developer charges should reflect the full efficient costs of providing water-related infrastructure to new developments.
- ▼ **Effective price signaling:** developer charges should send effective price signals about the costs of development in different locations.
- ▼ **Appropriate risk sharing:** developer charges should appropriately share the risks of development between LWAs and the developers.
- ▼ **Equity:** developer charges should equitably share the costs of development between developers, LWAs and existing ratepayers.
- ▼ **Simplicity, transparency and consistency:** developer charges should be set through a method that is simple for LWAs to administer, is transparent to all interested parties, and can be implemented consistently.

IPART also recognised that ultimately, the Guidelines will represent a trade off between these potentially competing objectives. For example, it may not be possible to develop a method that both ensures that developer charges reflect the full efficient costs of servicing developments and is relatively simple to apply. Therefore, in making its recommendations, IPART attempted to achieve a balance between the objectives.

In addition, IPART aimed to ensure that the Guidelines were consistent with good regulatory practice⁶. In particular, it considered the benefits of any potential changes to the Guidelines and compared them to the costs that those changes would impose on LWAs and developers. It is confident that the benefits of the changes it has recommended will outweigh these costs.

Overall, IPART found that the Guidelines could be improved to better meet the above objectives. It believes that DWE should redraft the Guidelines in consultation with IPART with the objective of improving clarity, transparency and precision in the calculation of charges.

The following sections provide an overview of IPART's key findings and recommended improvements.

⁶ The Tribunal has recently completed a review to improve regulatory efficiency. IPART, *Investigation into the burden of regulation in NSW and improving regulatory efficiency*, November 2006.

1.2.1 Full cost recovery

To meet the objective of full cost recovery, the Guidelines currently provide guidance on what water-related infrastructure (or assets) can be included in the developer charge calculation, and how these assets should be valued for the purpose of setting developer charges. Developers questioned whether these assets reflect the efficient costs of providing the infrastructure. They also raised concerns about some of the assets LWAs are including in the calculation.

IPART found that the Guidelines need to be refined to clarify which assets can be included in the developer charge calculation. It has recommended changes to the Guidelines to ensure that only those assets that have a clear nexus (or close connection) to the new development are included in the calculation. It has also recommended some refinements to the method for valuing these assets.

1.2.2 Effective price signaling and equity

Most LWAs in NSW have adopted a postage stamp approach in setting periodic charges for water and sewerage services. This means that their periodic charges do not signal the different costs involved in providing these services in different locations. The Guidelines currently allow LWAs to set differential developer charges for different development areas, to provide this signal and thus encourage development in the least costly areas.

However, IPART found that the Guidelines also provide LWAs with substantial scope to set developer charges in a way that distorts this signal. For example, the Guidelines allow LWAs to include more than one development area in one Development Service Plan (DSP). Because a single developer charge is set per DSP, this means that the developer charge represents the average cost of providing the services across several development areas. Therefore, it cannot signal any differences in the cost of providing services in each area.

This approach can also have implications for the equity of developer charges, because it allows cross-subsidisation between development areas that are less expensive to service and those that are more expensive to service. Ultimately, it means that people who buy properties in the 'less expensive' areas pay some of the costs of those who buy in the 'more expensive' areas.

The Guidelines also allow LWAs to levy a lower developer charge than the maximum that is calculated. Where this occurs, LWAs recover any revenue shortfall via increases to the periodic charges for water and sewerage services. This distorts the price signal sent by developer charges, and results in existing customers cross-subsidising the costs of new development.

IPART has recommended some changes to the Guidelines to limit the scope for cross-subsidisation and, where it does occur, ensure that it is more transparent to developers and existing customers. IPART recognises that these changes may

impose an administrative burden on smaller councils, and has sought to limit this impact in formulating its recommendations.

IPART also recognises that local councils have broad policy agendas, which aim to meet a range of financial, social and environmental objectives. While its recommended changes to the Guidelines maintain some scope for LWAs to pursue broader policy objectives in setting developer charges, as a matter of principle, IPART considers that developer charges are not an appropriate mechanism to achieve these broader policy objectives.

IPART also considers that LWAs need to make greater use of thorough economic appraisals in assessing development and only agree to developments where it is able to form the view that the development can pay its way by meeting the full cost of infrastructure provision.

1.2.3 Simplicity

In general, IPART believes that any pricing regime should be as simple as it can be, provided that this simplicity is not achieved at the expense of other objectives. It is particularly important that the Guidelines be simple to administer, because many of the LWAs who use them are small organisations with limited data and resources.

IPART found that for the most part, the Guidelines are reasonably simple to administer. However, it has recommended a number of minor amendments to enhance their simplicity. These include:

- ▼ clarifying the definition of equivalent tenements so that there is a single definition based on average demand
- ▼ requiring that the same method be used to calculate the developer charges for residential and non-residential developments
- ▼ specifying a single approach for calculating the reduction amount.

1.2.4 Transparency

Many developers have complained that often they can't understand how the developer charges levied on them have been calculated. This concern largely relates to the provision of information to developers and the quality of the information provided. While some LWAs appear to make a substantial quantity of high-quality information available to developers, most do not.

IPART found that the Guidelines are reasonably clear about the information LWAs should provide to interested parties. However, it has recommended some minor changes to emphasise the type of information, and the manner in which this information should be made available to interested parties.

Overall, IPART believes that there is a need for greater transparency in the calculation of developer charges so that developers can better understand the charges and how they have been calculated. Checking the accuracy and reasonableness of the assumptions made and costs included in the calculation of developer charges is largely left to the development industry through the public exhibition of the charges and information that underlies them. For this process to be effective, sufficient data and information needs to be made available in the exhibition process to allow for robust and thorough scrutiny. The failure of this part of the process may give cause for a more formal form of regulation.

Similarly, there is a need for greater disclosure to LWAs' existing water and sewerage customers to ensure greater accountability. IPART understands that developments can be (and often are) subsidised by existing water and sewerage customers, because LWAs choose to recover less than the cost of servicing a development from the developer. These discounts are often given in an attempt to encourage development. Where developer charges are discounted the implications for existing water and sewerage customers should be transparent. IPART considers that, at the very least, LWAs should disclose and explain the subsidies given to new developments and the accumulative impact of these subsidies on water and sewerage customers.

1.2.5 Consistency

IPART found that the Guidelines provide LWAs with substantial flexibility in setting their developer charges. In particular, they allow LWAs to establish a combination of developer charges and periodic charges that best reflect the needs of their communities, including socio-economic factors, development objectives and revenue adequacy.

Given the diversity of LWAs and the demographic/economic factors that they face, IPART recognises the importance of providing LWAs with some flexibility. However, it considers that the level of flexibility provided in the Guidelines has resulted in inconsistencies in the way different LWAs set their developer charges.

IPART has recommended several changes to the Guidelines to ensure a more consistent approach to setting developer charges across LWAs. In particular, it has recommended a greater oversight role by independent auditors to ensure that the Guidelines are interpreted consistently and applied correctly.

1.3 Structure of this Report

The remainder of this report explains IPART's review and recommendations in detail:

- ▼ Chapters 2 to 7 discuss each of the main areas of stakeholder concern about the existing Guidelines, including:
 - Implementing the Guidelines
 - Calculating the capital charge
 - Calculating the reduction amount
 - Determining the number of equivalent tenements
 - Levying the developer charge
 - Calculating developer charges for non-residential development
- ▼ Chapter 8 discusses two other issues stakeholders raised that are not addressed in the current Guidelines, including calculating developer charges in areas where backlog water and sewerage works are to be undertaken, and adjusting developer charges where the developer has used alternative technologies that place less demand on the water system.

These chapters also set out IPART's recommendations in relation to these areas of concern.

2 Implementing the Guidelines

Chapter 2: *Implementation of the Guidelines* discusses a range of administrative issues related to calculating and levying developer charges under the Guidelines.⁷ Stakeholders have raised a variety of concerns related to this chapter, including concerns about:

- ▼ the information to be included in Development Service Plans (DSPs)
- ▼ the exhibition of DSPs
- ▼ the registration of DSPs
- ▼ the review of DSPs, and
- ▼ the process for resolving disputes related to developer charges.

The sections below discuss each of these concerns and IPART's response and recommendations for each concern.

2.1 Information to be included in DSPs

The current Guidelines require LWAs to prepare a Development Servicing Plan (DSP) to explain each developer charge that they calculate. A DSP should set out the system of assets that will service the development in the area covered by the plan, and should include sufficiently detailed information to enable the developer and other interested parties to understand how the developer charge for that area was calculated. A DSP should also help the LWA demonstrate that it has complied with the Guidelines to calculate an efficient and fair charge.

The Guidelines state that the process used to calculate developer charges should be fair and transparent. To meet this objective, section 2.3.1 of the Guidelines specifies the minimum level of information that should be included in a DSP (see Box 2.1 below).

⁷ Chapter 1 of the Guidelines, *Background*, is an introductory chapter which contains no Guidelines that make a material difference to the preparation of development servicing plans or developer charges. Therefore IPART's review of the Guidelines begins with issues raised within chapter 2.

Box 2.1 Content of Development Servicing Plans (Section 2.3.1)

1. A summary of the contents of the DSP.
 2. Administration: the name of the DSP, the extent of the DSP area (including maps), the basis for defining its boundaries, the time charges are payable.
 3. Demographic and land use planning information. This should include the estimated population and ETs in 1996, and the projected population and ETs over the planning horizon.
 4. Timing of the works, including completed and proposed capital works.
 5. Standards of service to be provided in the DSP area, and design parameters.
 6. The calculated developer charge. The capital charge should be calculated in accordance with Chapter 3 and the reduction amount should be calculated in accordance with one of the 3 methods in Chapter 4, using the spreadsheets provided by the Department of Land and Water Conservation (now DWE).
 7. The cross-subsidy (if any).
 8. Reference to a background document containing all the critical data behind each DSP. This should include the models used to calculate the developer charges, commissioning dates and size/length of assets, MEERA valuation of assets, total asset capacity (in ETs) and the number of ETs served in the DSP.
 9. A reference to other relevant DSPs and to section 94 contribution plans.
-

2.1.1 Stakeholders' comments

Stakeholders are generally satisfied with the Guidelines' requirements in relation to the information to be included in the DSP itself. Most take the view that these requirements ensure that DSPs provide a satisfactory high-level summary of the relevant planning information and how the developer charge was calculated.

However, both developers and LWAs have concerns about the background document that should contain the models and critical data used in calculating the developer charge. On the one hand, the Urban Development Institute of Australia (UDIA) put the view that the:

Background and Concept Report should be compiled for the benefit of the general public, industry members, consultants and council officers. This report should be provided on request to industry consultants.⁸

The UDIA also emphasised that the background document should provide full access to electronic versions of the spreadsheets or models the LWA used to calculate the developer charge, so that the reader can step through the calculations. However, it stated that in its experience:

⁸ UDIA NSW submission, p 12.

... industry consultants have been routinely denied access to various aspects of the digital data that supports the “calculations of the developer charges”. This data includes digital copies in MS EXCEL format or similar to enable DSP assumptions, asset cost, capacity, descriptions etc as well as the calculations themselves.⁹

UDIA argued that ideally, the electronic models should include a DSP-specific asset list that is linked directly to the calculation of the capital charge so that assets within the calculation can be identified. In addition, if the LWA has the information available, it would be helpful if these assets were identified with a reference number that could be cross-referenced to a map of the DSP area. While it should not be seen as mandatory, the development industry believes that it would enable a simple check of whether the assets have nexus to the area.

UDIA also put the view that equivalent tenements (ETs) data is crucial for checking the calculation. It argued that the Guidelines should require that that background document include:

...the demographic data relied upon and substantial analysis of population projections and conversions to EP’s and ET’s, including vacant blocks and commercial/industrial areas.¹⁰

On the other hand, many LWAs commented that while transparency is of high importance to them, preparing a detailed background document is often a strain on their already stretched resources. For example, the Water Directorate stated that:

Council-owned water utilities may have difficulty in terms of staffing and cost impost in providing copious amounts of detailed documentation. Stakeholders should be prepared to pay a reasonable fee or else spend the necessary hours at the Council Administration Centre accessing detailed reports, plans, Local Environment Planning maps and the like.¹¹

Some LWAs stated they don’t provide electronic access to their models because the reader can change the data, assumptions and parameters.

Both industry and water authority stakeholders observed that while the information requirements specified in Guidelines should be sufficient to ensure that the calculation of developer charges is transparent to all parties, there seems to be a problem with the consistency of the information supplied by the different LWAs. For example Albury City Council said that

...the Guidelines are more than transparent. We believe that there are no difficulties in meeting the transparency requirement and if this is an issue then we believe that it will be in the standard of and how the DSP document is presented.¹²

⁹ UDIA NSW, NSW Regional DSP Principles Study 2006, p 27.

¹⁰ UDIA NSW submission, p 13.

¹¹ Water Directorate submission, p 1.

¹² Albury City Council submission, p 2.

2.1.2 IPART's response and recommendations

IPART recognises that it is important for stakeholders to have access to robust and sufficiently detailed information to scrutinise the calculation of the developer charge for each DSP area. IPART also recognises the administrative burden that the preparation of this information places on LWAs. For the most part, it considers that section 2.3.1 of the Guidelines provides adequate guidance on the information to be included in a DSP. However, the inconsistent quality and quantity of detailed information provided by LWAs in the background document suggests that clearer guidance is needed in relation to this document. Therefore, IPART's recommendations focus mainly on this background document.

Sections 2.3.1. (see Box 2.1 above) and 2.3.2 of the Guidelines already require LWAs to provide all the critical data, including the models, used in calculating the developer charge in the DSP. While some agencies provide full access to their calculation models in electronic spreadsheet format, IPART understands that many agencies release these models for public exhibition in a PDF or paper format. This means that stakeholders can view the final numbers only, and IPART considers that this does not make the calculation sufficiently transparent.

To enhance transparency, IPART considers that LWAs should provide full electronic access to their EXCEL (or similar program) spreadsheet calculations, to enable stakeholders to check that these calculations comply with the Guidelines. IPART notes that some LWAs commented that they don't provide electronic access to models because the reader can change the assumptions and parameters. As it is possible to 'lock' the spreadsheet so the data and parameters within it cannot be changed, IPART considers it appropriate that stakeholders are given electronic access to the models. In addition, electronic access for interested parties shouldn't be a problem as the LWA can retain the original copy of the model to defend any claims made against it. IPART therefore considers it is reasonable that LWAs provide electronic access to these models to interested parties upon request.

IPART also considers that the Guidelines should specify some additional information requirements, so that stakeholders can more readily identify the assets that have been included in calculating the developer charge, and understand the number of ETs used in the calculation, and the ET ratings used for different classes of development.

Given the above, IPART has recommended some minor amendments to the existing Guidelines to provide greater transparency for stakeholders and consistency between LWAs.

Recommendation

1 That the Guidelines be modified to:

- Require LWAs to make the background document referred to in paragraph 2.3.1 available for the duration of the public exhibition period, and to register this document with DWE, together with the DSP
- Specify that the background document should be provided in electronic format (such as on a CD) upon request
- Specify that the background document should include calculation models in EXCEL (or similar electronic spreadsheet) format, so that all components of the model can be investigated
- Specify that the calculation models should include an asset list that provides:
 - a. Direct links to the NPV or RoI model calculations
 - b. The purpose of the asset (reticulation, trunk main, pump, reservoir, dam, etc)
 - c. Individual asset numbers that are cross-referenced to a DSP area map (where the agency has this information).
- Specify that the background document should include a comprehensive explanation of how the total number of existing and forecast ETs was calculated, and an explanation of the comparative ET ratings for different classes of development.

2.2 Exhibition of DSPs

The Guidelines require LWAs to publicly exhibit a draft DSP before they adopt the plan and the developer charge associated with it. This requirement is intended to ensure that stakeholders have an opportunity to scrutinise the draft plan, and check that the developer charge complies with the Guidelines. Once the exhibition period ends, and any necessary amendments have been made, the final DSP can be adopted.

Section 2.3.2 of the Guidelines specifies that LWAs are to publicly exhibit draft DSPs for at least 30 working days. This section also specifies that LWAs are to inform key development organisations – the UDIA and Housing Industry Association (HIA) – plus developers who have applied for planning approval within the last 6 months that the plans are being exhibited. In addition, page 10 of the Guidelines state that:

Water utilities need to allow developers access to the calculations of the developer charges. Copies of these calculations and the draft and final DSPs must also be provided to the above development industry associations (the UDIA and HIA).

2.2.1 Stakeholders' comments

Some development industry stakeholders stated that accessing draft DSPs can be difficult, as some LWAs only make the plans available in hard copy format at the Council's offices.

Some LWAs noted that they make draft DSPs available on their websites to facilitate easy access. This approach also enhances the simplicity and transparency of the DSP process by reducing the ongoing administration involved in making DSPs available to interested parties.

The UDIA suggested that there is no need for LWAs to make the detailed background material available on their websites; rather, it proposed that this material should be provided electronically upon request during the exhibition period and once the charges have been adopted. The NSW Water Directorate agreed with this proposal, saying it would be appropriate for LWAs to place the DSP document on their website and provide the background document on a CD to those who seek more detailed calculations and background information.

2.2.2 IPART's response and recommendation

IPART agrees with stakeholders' suggestion that LWAs should make the draft DSP document available on their websites for the duration of the public exhibition period, and then make the final DSP available once the plan and developer charges are finalised. This is appropriate because most interested parties will only want to read a summary of the LWA's calculation, which is provided in the general DSP document.

After discussions with stakeholders, IPART also agrees that the more detailed background document, including electronic spreadsheet calculation models, should be provided in electronic format (such as on CD) upon request. It considers that making this document available on websites is unnecessary, as relatively few parties are interested in reviewing the calculation of developer charges in detail. It may also be problematic, because this document often has a large file size.

IPART believes the following recommendation will enhance transparency for interested parties by improving the format of and access to information when it is required.

Recommendation

- 2 That the Guidelines be modified so they specify that LWAs should make draft DSPs (excluding the detailed background documents) available on their website for the duration of the exhibition period, and make final DSPs available on their websites until they are replaced by a subsequent DSP.

2.3 Registration of DSPs

The current Guidelines require that LWAs submit all DSPs to DWE for registration, once these plans have been finalised and adopted at the end of the public exhibition period. The Guidelines also require that when submitting a final DSP, LWAs must also submit the draft DSP, submissions received in response to the draft DSP and their responses to those submissions.

2.3.1 Stakeholders' comments

Development industry stakeholders put the view that registration alone is not sufficient, and that DSPs also need to be checked for compliance with the Guidelines. They pointed out that there are often errors within calculations, and these should be identified and fixed before a DSP is allowed to be registered.

In its submission, DWE suggested that the role of checking DSPs to ensure their compliance with the Guidelines could be carried out by accredited auditors, based on a comprehensive checklist provided by DWE. It pointed out that a similar checklist already exists, as part of its *Best-Practice Management of Water Supply and Sewerage Guidelines*. It also suggested that the Guidelines could be improved by incorporating this checklist as an attachment.¹³

2.3.2 IPART's response and recommendations

IPART is mindful of the need to ensure consistency in the way LWAs calculate developer charges. It considers that the best way to do this is to create an oversight role that includes checking all DSPs prior to registration, to ensure that they are consistent with the Guidelines and all calculations are correct.

IPART considered making DWE responsible for this role, yet given that there are more than 100 LWAs providing water and sewerage services in NSW, it concluded that this would result in impractical delays due to the high number of DSPs to be checked. It considers that delays in the registration of DSPs and adoption of developer charges would create uncertainty and increase costs for both LWAs and developers. Therefore it is important that the registration process retain a level of simplicity, whilst encouraging more consistent preparation of DSPs.

IPART therefore prefers DWE's proposal that the role of checking DSPs prior to registration be performed by appropriately accredited auditors. Under this scenario, the existing checklist within the *Best-Practice Management of Water Supply and Sewerage Guidelines* would be enhanced by DWE and formalised as an attachment to the developer charges Guidelines. LWAs would then be required to engage an accredited auditor to review whether the DSPs satisfies the requirements on the checklist. The auditors report would then be required to be submitted, along with

¹³ Department of Water and Energy submission p 1.

the LWA's DSP, to DWE for registration. This approach should achieve the goal of greater consistency in the way LWAs apply the Guidelines, without resulting in the significant delays that could occur if DWE were required review all DSPs.

DWE would also be required to establish the necessary accreditation that the auditors must have in order to complete the checklist. It is expected that the accreditation of auditors would include some level of training by DWE to ensure the checklist is completed satisfactorily. At a minimum the auditors would have the appropriate experience in dealing with the preparation of developer charges and DSPs. The auditors may also need some level of training (as organised by DWE) to ensure that there is a full understanding of the requirements.

IPART considers that the following recommendation will enhance the consistency and accuracy of charges while retaining the simplicity required by all stakeholders so that charges are adopted in a timely manner.

Recommendation

- 3 That the Guidelines be modified to specify that LWAs are required to have all DSPs reviewed by an accredited auditor before they submit them to DWE for registration, and to provide the auditor's report to DWE (along with the DSP and other documents specified in section 2.4 of the current Guidelines).
- 4 That DWE establish a process for accrediting auditors, and prepare a comprehensive checklist for use by these auditors. The checklist should enable the auditors to check that the DSP complies with the Guidelines.

2.4 Review of DSPs

Under the current Guidelines, a DSP and the associated developer charge are valid for five to six years. After this time, LWAs are required to prepare a new DSP, and exhibit and register this DSP as described above.

An earlier review is possible, but only if warranted by major changes in the planning of the development or forecast capital expenditures that were not expected at the time of the previous review, and with the prior approval of DWE. These conditions are intended to signal the need for robust forecasts when preparing DSPs and calculating developer charges, and to provide certainty to developers about the charges they will face for at least five years.

Once a DSP and developer charge have been adopted for an area, the charge is adjusted each year between reviews in line with the change in the Consumer Price Index (CPI). This enables the charge, which is calculated in present value terms, to remain constant in real terms whether development occurs in the first or last year that the DSP is valid.

After completing a review of a DSP, the LWA may elect to phase in the new developer charge if it is significantly higher than the existing charge. The phase-in period may be up to 3 years, and the LWA is required to disclose any cross-subsidy remaining once the phase-in is complete.¹⁴

2.4.1 Stakeholders' comments

Some LWA stakeholders put the view that, due to rapidly rising construction costs, adjusting developer charges in line with the change in the CPI is not sufficient to ensure these charges maintain their value during the period over which they are valid. For example, a representative of the Eurobodalla Shire Council made the following comment at a public workshop:

The cost of construction is going up all the time across New South Wales because of the drought and because of the other focus on water infrastructure throughout Australia. The difficulties with getting construction contractors, designers, et cetera, have pushed construction costs way above what we previously would have allowed...¹⁵

These stakeholders also put the view that, as a result of this, developer charges are under-recovering the cost of providing the infrastructure. They proposed that it would be more appropriate to adjust charges annually by the change in a construction cost index instead of the CPI, as this would better reflect the changing value of assets.

Development industry stakeholders did not comment on this issue.

2.4.2 IPART's response and recommendation

IPART considers that where rising construction costs are an issue, it would be better to review a DSP more frequently than to adjust the associated developer charge by the change in a construction index. It notes that an earlier review is possible under the existing Guidelines where major changes in circumstances occur, subject to approval by DWE.

IPART prefers more frequent reviews because after conducting a review, the LWA may find that future assets are no longer viable given the extent to which construction costs have risen. It may then change the DSP to service more appropriate developments or change the means of serving developments. Conducting more frequent reviews will therefore provide two benefits: it will take the latest servicing plan into account, and it will update the cost of future works. IPART considers that these benefits will offset the additional costs of undertaking more frequent reviews.

¹⁴ Phase-in of high charges is raised at section 5.3 of the Guidelines, though has been raised here as context to the Review of DSPs.

¹⁵ Carmel Krogh, Eurobodalla Shire Council. Nowra public workshop, 1 June 2007, transcript p 60.

IPART prefers to continue using the CPI to adjust developer charges between reviews because the capital cost of assets is only one component of the developer charge equation. When a developer charge is inflated between reviews, the revenues and operating costs are inflated as well as the asset values. If a construction cost index were used as the inflator, these other parameters would be adjusted in line with the change in construction costs, even though they bear no relationship to these costs. The cost of existing assets would also be adjusted in line with this change, and the costs of these assets, having been met, also have no relationship to the change in construction costs.

Moreover, the purpose of CPI indexation is to maintain the value of the charge between reviews in real terms and this can only be achieved through CPI indexation.

Recommendation

- 5 That the Guidelines continue using the CPI to index developer charges between reviews, and there be no change to the conditions for conducting reviews of DSPs.

2.5 Dispute resolution

Under the current Guidelines, developers have the opportunity to discuss their concerns about the proposed developer charges with the LWA during the public exhibition of the draft DSP. Once the DSP has been finalised, the Guidelines outline a negotiate-arbitrate dispute resolution process, whereby the developer and the LWA discuss the problem, and then proceed to arbitration if they cannot agree. Under this process, complaints by developers must be directed to the LWA's general manager for review, in the first instance. If the developer is dissatisfied with the results of this review, it can take the matter to arbitration.

There is no formal involvement by DWE in the dispute resolution process. There is also no formal mechanism for monitoring and amending the Guidelines when disputes occur.

2.5.1 Stakeholders' comments

The UDIA expressed the view that the Guidelines need to specify that arbitration remains an option, even though it is expensive and therefore may not be considered a viable option by some developers, despite their dissatisfaction. It stated that apart from arbitration

There is little else to provide a unifying management and interpretive influence.¹⁶

A representative of the UDIA also commented that to address inconsistencies in the way that LWAs interpret the Guidelines, it would be useful to have a process

¹⁶ UDIA NSW submission, p 16.

through which matters of interpretation could be determined by a governing body such as DWE without going to arbitration:

I believe that some sort of intermediate process or some sort of oversight, by whatever body it may be, in resolving issues would be helpful.¹⁷

Representatives from LWAs commented that an advisory body could be useful, though the terms of reference and member representatives for such a body would need to be decided after further consultation. DWE advised that if such a group were to be established, it would need to report to the Director-General of DWE and would not be empowered to publish binding guidelines.

One alternative to arbitration is to use an ombudsman scheme. In its submission, the NSW Energy and Water Ombudsman (EWON) expressed interest in providing its dispute resolution services for non-metropolitan water providers. EWON's services for water-related matters are currently restricted to customers of Sydney Water, Hunter Water, Country Energy and State Water.

IPART believes that EWON's services may be useful for resolving some disputes about developer charges levied by non-metropolitan LWAs. In discussions with IPART, EWON indicated that it conducts a small number of inquiries into disputes between developers and the metropolitan water agencies. However, EWON considers that its area of expertise is suited to disputes concerning levying of the charge; disputes concerning the correct calculation of the charge are beyond its core function and so would be more suited to another body.

Currently, the metropolitan water agencies either use EWON voluntarily, or are required to do so by legislation or some other legal instrument. The cost of EWON's investigations is billed to the agency involved, and this cost ranges from \$100 to \$5000 depending on EWON's involvement. IPART asked EWON whether it would consider splitting the costs involved in a dispute resolution inquiry between the agency and the developer (as occurs in arbitration). EWON did not rule this out, although it was reluctant to agree as it may be inconsistent with its operating principles.

As customers of the non-metropolitan LWAs are currently beyond EWON's jurisdiction, DWE and EWON would have to consider this arrangement further when the Guidelines are re-drafted. A number of other matters are of concern to EWON, such as the high number of LWAs it would have to deal with, precisely which matters would be referred to it, and whether Guidelines are a sufficiently powerful instrument to require agencies to be bound by EWON's rulings. Therefore EWON indicated that it would prefer to discuss the terms of its involvement with DWE before making a commitment.

¹⁷ Peter Price, representative for the UDIA. Nowra public workshop, 1 June 2007, transcript p 39.

2.5.2 IPART's response and recommendations

IPART recognises developers' frustration with the fact that, under the current Guidelines, the only way to resolve a dispute about the correct interpretation of the Guidelines is via arbitration. It agrees that arbitration is a necessary option, but it should be seen as a last resort, as it can be costly and impractical. IPART also agrees that there should be a body that stakeholders can turn to when disputes about the interpretation of the Guidelines occur.

After its formal consultation process, IPART raised the idea of forming an 'Expert Panel' with some key stakeholders who attended the public workshops. It proposed that such a panel could discuss and provide advice on matters related to the interpretation of the Guidelines, and could include representatives from LWAs, developers, DWE and IPART. Stakeholders generally supported this idea, but some were hesitant to fully accept it without seeing the terms of reference for the panel.

In IPART's view, the establishment of a panel as outlined above would help to address developers' concerns about inconsistencies in LWAs' interpretation of the Guidelines. IPART considers that the panel should include representatives of the LWAs (possibly including a representative of the NSW Water Directorate), the development industry and DWE. In addition, because the Guidelines are based on the IPART methodology for calculating developer charges that metropolitan water agencies are required to use, some form of IPART involvement – either through representation on the panel or consultation – would be desirable, to limit the scope for the Guidelines to diverge from their intended purpose. Representatives from both LWAs and the development industry will enhance consultation so that practical and efficient outcomes can be agreed.

The panel would exist as an advisory body only, and would not be able to produce binding guidelines of its own. Therefore, the panel would need to report to the Director-General of DWE, who could subsequently report any interpretational issues to the Minister. In re-drafting the Guidelines and forming the panel, DWE could consult further with the suggested panel members to decide on how it would operate.

IPART is also conscious of the potential for the panel to be inundated with a wide range of relatively minor issues which could divert resources away from issues of greater importance. Therefore, IPART believes that the panel should have the discretion to decide whether an issue is sufficiently important to warrant consideration and written guidance from the committee. "Importance" should be judged not only in the context of the particular development, but also whether the issue requiring interpretation or guidance is of broader application so that its resolution will benefit all/much stakeholders.

IPART considers that DWE and EWON should discuss the use of EWON's services as part of the dispute resolution process specified in the Guidelines. EWON offers services that may help in resolving matters related to the levying of developer charges (rather than matters related to interpreting the Guidelines).

Finally, IPART considers that arbitration should remain an option available for the resolution of disputes where developers wish to pursue this option.

Recommendation

- 6 That an expert technical panel be formed to advise the Director-General of DWE on technical matters or issues of interpretation in relation to the Guidelines. This panel should include representatives from DWE, IPART, the NSW Water Directorate, local water authorities and the development industry.
- 7 That DWE approach EWON to discuss the possible use of EWON's services as part of the dispute resolution process specified in the Guidelines.

3 Calculating the capital charge

The capital charge represents the efficient cost of assets used in providing water-related services in the DSP area. This may include the cost of both existing and future assets that will be used to service each DSP area. In addition, because LWAs provide the upfront funding for constructing these assets, the capital charge also includes a commercial return on this investment. The capital charge is calculated as dollars per equivalent tenement (ET), the reduction amount per ET is then subtracted from this to give the final developer charge per ET.

Chapter 3 of the Guidelines: *The Capital Charge*, specifies how LWAs should calculate the capital charge, and covers:

- ▼ what assets can be included
- ▼ how these assets should be valued
- ▼ how the number and size of DSP areas should be determined
- ▼ how the return on investment should be calculated, including what discount rate should be used in this calculation
- ▼ how the capital charge per ET should be calculated.

Stakeholders raised concerns in relation to each of these matters. The sections below discuss these concerns and IPART's response and recommendations for each.

3.1 What assets can be included

LWAs provide a large network of infrastructure for existing customers. Where new developments occur, they may need to add new assets to this network to service the development. The Guidelines specify that LWAs may seek to obtain contributions via developer charges for providing, extending or augmenting assets required, or likely to be required, to provide services to a development area.

Stakeholders raised concerns related to the information LWAs provide about the assets included in the capital charge, the inclusion of existing assets, the inclusion of future assets beyond five years, and the inclusion of reticulation assets.

3.1.1 Information provided about assets included in the capital charge

Section 3.1 of the Guidelines specifies that if a LWA includes assets in a DSP (and therefore in the capital charge) it must demonstrate that there is a nexus (ie, a connection or link) between the development covered by the DSP and the assets required to serve the development. To demonstrate such a nexus, the LWA needs to set out the projected growth and the assets required to serve that growth. The Guidelines also specify that these assets should be clearly identified in the DSP.

Stakeholders' comments

Development industry stakeholders raised concerns about the level of LWAs' compliance with the requirements in relation to providing information on assets included in DSPs. For example, at one of IPART's public workshops, the UDIA representatives argued that LWAs are including assets in DSPs that do not have a nexus with the development. The UDIA noted that agencies had often included reticulation assets¹⁸, and in one case a cycleway¹⁹, as an example of assets that should be excluded from the calculation. They proposed that LWAs should be required to provide sufficient asset register and plan information to demonstrate how the location, design and use of assets included in DSPs relate to the development.

Other development industry stakeholders commented that assets included in DSPs are often not itemised in a way that enables the developer to clearly identify them. The discussion also indicated that there is considerable variability in the way LWAs list and categorise assets, which detracts from the simplicity and transparency of DSPs.

There was limited response from other stakeholders on this issue. However, Port Macquarie Council noted that the mapping of assets to particular DSPs was a costly exercise. The Council also suggested that the cost of this additional work for new developments should be included in the capital charge.

IPART's response and recommendation

The Guidelines clearly state that for assets to be included in the DSP (and reflected in the capital charge) there must be a nexus between the development covered by the DSP and the assets required to serve the development. That is, the capital charge should only include assets that are directly attributable to the new development area. This can include new or future assets that serve the development area.

IPART recognises that the calculation of developer charges needs to be simple and transparent, to allow stakeholders to scrutinise the calculation and satisfy themselves that the resulting charges are fair and reasonable. Therefore it supports the

¹⁸ UDIA submission, p 18.

¹⁹ Chris Taylor, representative for the UDIA. Nowra public workshop, 1 June 2007, p 40.

development industry's call for greater transparency in relation to the underlying data in DSPs and the calculations used to derive developer charges.

In addition, IPART considers that the Guidelines would be improved by requiring LWAs to identify assets in sufficient detail to clearly demonstrate the nexus to the development – for example, by including maps that depict the assets included in the DSP, and data tables that specify the construction date, actual construction cost, MEERA value, ET capacity etc.

Recommendation 1, discussed in Chapter 2 of this report, is intended to address these matters.

3.1.2 Inclusion of existing assets

The Guidelines specify the types of existing assets that can be included in the capital charge. Clause 3.1.2 states that

All existing assets serving a development area should be included in the capital charge, except 1 and 2 below.

1. If the capacity of an asset is unlikely to be fully utilized over the planning horizon for calculating developer charges (typically 30 years, but may be over 50 years for assets such as dams and outfalls), then the cost of the capacity for serving development beyond the planning horizon cannot be recovered through developer charges...
2. Assets commissioned before 1970 are not included in the capital charge except water supply headworks system assets (eg a dam, weir, water treatment works, headworks pumping station, and associated pipelines or tunnels) and sewerage major works (eg sewage treatment works, effluent management works, major trunk sewers, major pumping stations and rising mains).

Stakeholders' comments

The development industry did not support the inclusion of any pre-1970 assets in the capital charge. In its submission, the UDIA stated that:

The industry position is that the pre 1970 assets should not be included as these are “sunk” as agreed by the discussions of the Water Industry Forum in the early 1990's for the IPART Determinations 1995 and 2000.

It is unreasonable and inequitable that costs paid for by a grandfather, father and son should be charged again to subsequent generations at inflated prices. This is true inter-generational inequity. The forebears have already met the full cost. This inclusion disadvantages young families needlessly.

There can be no reasonable basis for inclusion and thus revaluing pre 1970 assets.²⁰

²⁰ UDIA submission, p 17.

However, LWAs generally supported the inclusion of all assets that have a nexus to the development, whenever they were built. For example, Clarence Valley Council argued that assets can be designed to provide spare capacity, therefore, those pre-1970 assets that still have spare capacity should be included in the capital charge.

Hunter Water Australia put the view that:

There is a case to include pre-1970 assets if they are still providing capacity to service growth and this is happening in a lot of small towns and villages. However their inclusion should be a function of the degree of spare capacity and the rate of growth. As previously stated, if the growth is low it is better not to include the assets or even have no charges at all in order to encourage take-up of the spare capacity.²¹

Port Macquarie Hastings Council noted that it is difficult to reliably predict growth rates for individual service areas and there could be long periods of time before full capacity is taken up.

LWAs also expressed concern that limiting the scope for inclusion of old assets would result in a shortfall in their developer charges income, which would then have to be recovered from existing ratepayers.

In addition, stakeholders expressed some concern about the 'exception' provision to the exclusion of pre-1970 assets in the Guidelines. As noted above, the Guidelines specify that pre-1970 assets should be excluded from DSPs, except for water supply headworks system assets and sewerage major works. Some participants at IPART's public workshops commented that this exception is too broad, and noted that there have been disputes about which pre-1970 assets are considered headworks.

IPART's response and recommendations

As a general rule, IPART considers that assets older than 30 years should be excluded from the capital charge, as it is very unlikely that current and future development influenced the decisions to build these assets. In other words, there is unlikely to be a nexus between development taking place now and assets built more than 30 years ago.

In addition, some of these old assets may already have been fully funded by past developer charges or periodic charges. In these cases described above, the old assets should be treated as sunk costs and not incorporated into the developer charge calculation. Further, IPART considers that excluding assets older than 30 years will encourage any remaining capacity in them to be taken up as the charge will be lower in those areas. For example, if a particular service area only has pre-1970 assets then the developer charge will be zero. This price signal will therefore encourage development where there is remaining 'sunk' capacity.

²¹ Hunter Water Australia submission, p 5.

However, IPART also recognises that for some headworks assets, such as dams or sewerage treatment plants, a longer time horizon for effective utilisation may have been forecast at the time of construction. In these cases, the inclusion of assets older than 30 years in the capital charge may be justified.

Given the above, and stakeholders' comments that the current exceptions clause in the Guidelines has led to disputes, IPART considers that the Guidelines should be modified to specify that, as a general rule, assets more than 30 years old should be excluded from the capital charge. In addition, the Guidelines should specify that LWAs can apply for an exception to this rule for headworks assets, providing the original planning strategy for the asset shows it was planned to provide capacity into the current DSP period. DWE, and in certain cases the Expert Panel referred to in Recommendation 6 – should review the merit of each application for exception on a case-by-case basis.

Recommendations

- 8 That the Guidelines be modified to specify that, each time a DSP is reviewed, assets that will be more than 30 years old at the commencement of the DSP must be excluded from the capital charge.
- 9 That the Guidelines be modified to specify that where a LWA seeks to include headworks assets in the capital charge that will be older than 30 years at the commencement of the DSP, it will need to produce documentation to justify this inclusion. The documents must show that when the asset was constructed it was planned to provide capacity for growth into the current DSP period. This document should be considered by DWE in the first instance, and possibly referred to the Expert Panel by the Director General of DWE if stakeholder consultation is required, before the assets are approved to be included in the DSP.

3.1.3 Inclusion of future assets

Clause 3.1.2 of the Guidelines specifies that:

Where a development area is expected to make use of future assets, the cost of these assets should be included in the developer charge. As a DSP applies for approximately 5 years, it is likely that future assets will be required to serve future development in the area. Typically, assets planned for commissioning within about the next 5 years should be included. . .

Future assets beyond 5 years may be included if there is a clear nexus to the development. For example, a future water treatment works for a currently unfiltered water supply will clearly serve the development, even if it is planned to be constructed beyond 5 years.

Stakeholders' comments

Stakeholders expressed a range of views about the inclusion of future assets beyond 5 years in the capital charge. The development industry argued that for a future asset to be included, in addition to there being a clear nexus to the development, there should also be certainty that this asset will be built to the design and at the date forecast. UDIA noted that:

There is a problem for some Councils planning more than 5 years into the future where growth is slow. Up to 10 years may be reasonable. The current problem is that there are instances of inclusion of assets up to 30 years in the future. The most unsatisfactory aspect of distant future asset inclusion is a lack of planning and design documentation. This is a problem with all assets in many DSPs, but it is a particular problem with major assets included more than 10 years out in the future.²²

However, Albury City Council put the view that assets planned for commissioning within at least 10 years should be included in the capital charge. The Council stated that:

Given that LWAs have to develop forward business plans, including financial and works programs, as part of complying with the 6 best-practice criteria, then it is logical to consider a planning horizon of at least 10 years.²³

Some other LWAs also supported including future assets beyond the 5-year timeframe for setting developer charges. For example, Port Macquarie Hastings Council commented that it:

...supports the IPART approach of including all assets if a nexus to development can be established.

A major problem that Council has faced in future planning is out of sequence development. Particular locations for growth are hard to predict even 5 years out and often depend on individual developers to proceed. A larger planning horizon is needed to enable Council to adjust to changing patterns of growth by delaying works and bringing forward other works depending on development pressures.²⁴

In contrast, Mid-Coast Water noted that currently, it only includes assets within its 5-year planning horizon. It indicated that there are substantial difficulties in predicting further than 5 years ahead for the following reasons:

- Demand patterns regularly change as initiatives such as demand management are implemented.
- Service level expectations from our customers are increasing and need to be reviewed regularly.
- We have found developer intent notoriously difficult to predict, and growth sequences difficult to control. We find this is influenced more by the real estate market than other factors.

²² UDIA submission, p 17.

²³ Albury City Council submission, p 4.

²⁴ Port Macquarie - Hastings Council submission, p 5.

- Regulatory issues are significant. Environmental flows in rivers, EPA licensing legislation and Department of Planning intervention into the density of development are just a few. In general, costs of compliance are incurred due to the higher levels of service expected by our regulators.
- Climate variability affects the effectiveness of our assets, and new information is becoming available.
- As we have relatively decentralised population centres, the need to build one large asset can be avoided and inherently allows us to stage infrastructure construction.

In saying all of the above, we have no objection to including assets beyond 5 years if directed to by the Guidelines.²⁵

IPART's response and recommendation

The 5-year limitation on including future assets in the capital charge reflects the fact that assets need to exist in order to serve a development. The issue of planning, and how long it might take to plan, is a secondary issue.

It is unlikely that development that occurs over the 5-year life of a DSP will use any assets commissioned beyond that timeframe, because the assets must be in place before development occurs. Therefore, assets further than 5 years in the future should generally be excluded as it is unlikely they will serve people who pay developer charges over the next five years.

If future assets beyond 5 years are to be included, the basis for inclusion should be whether these assets have a nexus to the development, and whether the information about the assets is sufficiently reliable.

Given the above, IPART considers that the Guidelines should be modified to more clearly specify that only future assets planned for commissioning within the next 5 years should be included in the capital charge. IPART also considers that the Guidelines should be modified so that LWAs that seek an exception from this rule must meet more rigorous requirements, such as providing a detailed plan showing that the assets will be built as and when forecast.

Recommendation

10 That the Guidelines be modified to specify that only future assets to be constructed within 5 years of the commencement of the DSP should be included in the capital charge, and that in order to gain an exemption from this 5-year rule, LWAs need to demonstrate there is a clear nexus between the future assets concerned and the development and provide detailed plans that establish that the assets will be built as and when forecast.

²⁵ MidCoast Water submission, p 10.

3.1.4 Inclusion of reticulation assets

Clause 3.1.2 of the Guidelines specifies that reticulation assets should be excluded from the capital charge, because in general developers pay for these assets themselves. It defines reticulation assets as “local pipework providing water supply or sewerage services to individual properties”.

Stakeholders' comments

The UDIA supported the exclusion of reticulation assets, and argued for a “blanket exclusion” of reticulation assets from the developer charges calculation on the grounds that LWAs rarely provide these assets. UDIA also commented that allowing the inclusion of some reticulation assets will increase the complexity of developer charges, as each developer would need to have the charge recalculated based on which assets it ultimately provided. As a result, the LWA could not “set and forget” the charge, and would have to re-visit it for each new development application that arose.

LWAs supported the inclusion of reticulation assets where these assets have been paid for by the LWA.

IPART's response and recommendations

IPART considers that, in principle, developers should not be asked to pay for any assets that serve the same purpose as assets they have paid for directly and/or contributed to. For example, if a developer installs reticulation assets for the blocks of land it is developing, it should not be asked to make a contribution towards the costs of reticulation assets that the LWA might install to serve other parts of the development area.

However, if an LWA pays for reticulation assets that serve some parts of a development area, then the developers of those parts should be asked to pay a developer charge that includes the cost of the reticulation assets. This is necessary to ensure that the LWA recovers the full cost of providing the infrastructure serving the development.

IPART considers that the Guidelines should be amended so that LWAs have the option of including reticulation assets they have paid for in the capital charge. This may result in some additional administration for LWAs, as it will mean there can be two different developer charges (or capital charges) for each DSP. However, if a LWA does not wish to calculate the second charge, it can simply exclude all reticulation assets. In essence, if the LWA believes its reticulation expenditure to service a new development is significant, it can make the extra effort involved in calculating a second charge to recover this expenditure.

Recommendation

- 11 That the Guidelines continue to require all LWAs to calculate a developer charge for each DSP area that excludes all reticulation assets.
- 12 That the Guidelines be modified so that LWAs also have the option of calculating a second developer charge that includes the reticulation assets paid for by the LWA, and can levy this second charge on developers that have not provided their own reticulation (such as in-fill development and development in backlog areas).

3.2 How existing assets should be valued

The Guidelines specify that LWAs must value existing assets using Modern Engineering Equivalent Replacement Asset (MEERA) values. The MEERA value of an asset is defined as “the value of an asset on the basis that the asset is constructed at the time of valuation in accordance with modern engineering practice and the most economically viable technology, which provides similar utility functions to the existing asset in service”. The Guidelines also indicate that the value of existing assets should include costs for investigation, design, project management, and an appropriate allowance for contingencies.

‘Contingencies’ refers to events that can happen, but are generally not anticipated.

Stakeholders’ comment

Stakeholders’ main concern in relation to this section of the Guidelines is the inclusion of an allowance for contingencies in the valuation of existing assets. For example, DWE noted that:

The NSW Reference Rates Manual which has been prepared by DWE to assist LWUs in the statutory valuation of the replacement cost of their existing infrastructure, as well as for developer charges calculations uses a 10% contingency for valuing existing assets for the following reasons:

- (1) The reference rates in the Manual are based on competitive contract prices obtained by the Department of Commerce for water supply and sewerage projects within NSW. It has been found that tender prices received are typically in the range 0 to 20% higher than the pre-tender cost estimates.
- (2) In addition, a review of tenders has found that the average final cost of contracts (excluding increases to the scope of the contracts) was 107% of the tendered price (range 100% to 150%).²⁶

However, UDIA submitted that:

The development industry has expressed the view that contingencies being included by some local water authorities may be excessive and there might be some instances of double-counting to the extent that contingencies are already built into the reference rates.²⁷

²⁶ DWE supplementary submission, p 5.

²⁷ Transcript of public workshop Nowra 1 June 2007, p 58

IPART's response and recommendation

IPART notes that the use of MEERA values in valuing existing assets is consistent with the IPART methodology for setting developer charges used by the metropolitan water agencies. However, the inclusion of a contingencies allowance in the MEERA value of an existing asset is not recommended by IPART.

While IPART considers that it is reasonable to include an allowance for contingencies when estimating the construction costs of future assets (discussed in the next section), for existing assets the construction costs are known. There are no uncertainties regarding the cost of existing assets that would warrant the use of contingencies.

Therefore, IPART considers that the Guidelines should be amended to clarify the treatment of contingencies in the valuation of existing assets.

Recommendation

13 That the Guidelines continue to specify that existing assets be valued using MEERA values, but be modified to ensure that contingencies are not included in this valuation.

3.3 How future assets should be valued

The Guidelines state that LWAs should value future assets based on investigation/design reports. The Guidelines also state that this value should include construction costs and capital costs, and that capital costs should include costs for investigation, design and project management and an appropriate allowance for contingencies. However, the Guidelines do not indicate what an appropriate allowance for contingencies might be.

Stakeholders' comments

Stakeholders' main concern about the valuation of future assets relates to the inclusion of a contingencies allowance in the valuation, and the appropriate size of this allowance. The UDIA argued that uncertainties about future project costs should be incorporated in the discount rates used to convert future cash flows into Net Present Value terms rather than included in the valuation of future assets. However, the UDIA also submitted that if a contingencies allowance were included in this valuation, the allowance should generally be 10 per cent, but could be up to 20 per cent where there are particularly difficult construction scenarios that are explained in the DSP.

At IPART's public workshops, a number of LWAs argued in support of the current arrangements in relation to the allowance for contingencies in the valuation of future assets. The Water Directorate commented that:

Our experience right now is that the estimates for infrastructure we had done as recent as two to three years ago, where we were criticised for the large contingency that we built

into those estimates, have now come to fruition and the actual construction tender costs have come in above those estimates. We certainly are standing by the estimates we put in our plans and we go into far more detail than the reference rates given by DEUS [DWE].²⁸

In its submission, Port Macquarie Hastings Council indicated that design reports for the construction of future assets typically include a contingencies allowance of 15-30 per cent, depending on the stage of the project.

IPART's response and recommendations

IPART considers that future assets should be valued on a MEERA basis, rather than from "concept design reports". IPART expects that valuations based on MEERA values will be the same as those based on design reports; however, requiring LWAs to use the MEERA values will ensure a clear basis for valuation, and will mean that a consistent approach is used in valuing existing and future assets.

In addition, as noted in the previous section, IPART considers that it is reasonable to include an allowance for contingencies when estimating the construction costs of future assets, as these costs are uncertain. In relation to the appropriate level for this allowance, IPART has considered the comments from LWAs who explained that final costs regularly exceed initial estimates due to rising construction costs. Therefore the Tribunal has decided it is reasonable that for future assets, the contingencies allowance should not exceed a maximum of 20 per cent above MEERA values. In IPART's view, this approach will ensure a greater level of cost reflectivity in setting developer charges.

Recommendations

- 14 That the Guidelines be modified to specify that the valuation of future assets should be on a MEERA basis.
- 15 That the Guidelines be modified to specify that the allowance for contingencies included in the valuation of future assets do not exceed 20 per cent.

3.4 How the size and number of DSP areas should be determined

The Guidelines specify that DSP areas should be established according to service areas. The Guidelines define service areas as:

- ▼ areas served by a separate water distribution system
- ▼ areas served by a separate sewage treatment works
- ▼ separate small towns or villages
- ▼ new development areas of over 500 lots.

²⁸ Transcript for public workshop in Nowra, 1 June 2007, p 60.

In addition, the Guidelines indicate that, in some circumstances, LWAs can 'agglomerate' two or more of these service areas and prepare a single DSP (and calculate a single capital charge) for the whole area. The Guidelines also specify the methodology they must use in doing this.

Stakeholders did not raise concerns about the Guidelines' definition of service areas. However, the methodology for agglomerating was contentious.

3.4.1 Agglomeration of service areas

Under the Guidelines, LWAs are allowed to 'agglomerate' two or more service areas into one "DSP area", so that a weighted average developer charge is calculated for the whole DSP area. However, this is only allowed where the calculated capital charges for the individual service areas do not differ from each other by more than 30 per cent (the '30% Rule').

The Guidelines specify that in agglomerating service areas, the LWA must:

- ▼ rank the calculated capital charges for each service area in descending order
- ▼ group the service areas into DSP areas so that the calculated capital charge for each area within a group is between 70 per cent and 100 per cent of the highest charge in that group²⁹
- ▼ calculate a single capital charge for each DSP area by calculating the weighted average capital charge of all the service areas within that DSP area. The weights used in calculating this charge should be based on the proportion of growth in each service area compared to the combined DSP area.³⁰

On 28 September 2004, a circular issued by the Director General of DWE approved the insertion of additional agglomeration guidelines³¹ to provide LWAs with more flexibility in the agglomeration process. The additional guidelines allow LWAs to choose from the following options:

- ▼ agglomerating all service areas into one DSP
- ▼ agglomerating "the next highest or the next lowest DSP area on the basis of the weighted average developer charge for their areas".³²

However, the ability to adopt the above options for agglomeration is qualified in the Director-General's circular. Specifically, the Direction states that

...additional agglomeration is not recommended for new development areas with high calculated developer charges (over about \$20,000 per ET) where these areas involve a significant proportion of the LWAs new development.³³

²⁹ This process is illustrated in Table 4 in Attachment 4 of the Guidelines.

³⁰ This is described in section 4.2 of Attachment 4 in the Guidelines.

³¹ This is included in Appendix F.

³² After the capital charges for individual service areas have been ranked and grouped according to the 30% Rule, the highest ranked capital charge in one group can be agglomerated with the lowest ranked charge for the service area in the group immediately above it.

3.4.2 Stakeholders' comments

LWAs put the view that agglomeration makes the Guidelines simpler for them to administer, because it reduces the number of DSPs they have to prepare and review, and makes it easier for the community to understand developer charges as there are less variations in the charges levied. Some LWAs argued that they should be able to agglomerate all the service areas they are responsible for, for reasons of simplicity and ease of calculation. This would result in a single DSP for a whole local government area.

For example, MidCoast Water submitted that it:

... is concerned about the administrative burden on managing many DSP's, but even more concerned about the impact of disproportionately high developer charges on modest development in our small villages . . . We are a strong supporter of agglomeration and would not support a decrease in the 30% factor.³⁴

The Water Directorate of NSW submitted that:

It is essential that Council-owned water utilities be permitted to agglomerate DSPs. At the scale of most regional water utilities it can become an economic absurdity to try and send "locational price signals" to developers in different parts of a small area. This comment was made with respect to the earlier issue of consistency of charging across NSW.

IPART is used to regulating large water utilities. IPART staff need to realise that many Council-owned water utilities are much smaller by comparison, the likely development is at a much smaller scale, and the anomalies, both arithmetic and logical, which can arise from trying to be too economically "pure" can easily escalate to the level of "ridiculous". . . In the Water Directorate's view there is no need for a 30% rule. Council-owned water utilities should be able to agglomerate DSPs at their own discretion.³⁵

Development industry stakeholders also recognises the benefits of agglomeration in improving the simplicity of the process of setting developer charges. However, developers objected to large cross-subsidies due to agglomeration, as these can significantly affect their investment decisions.

The development industry also raised concerns about the way some LWA applied the methodology specified in the Guidelines for calculating the developer charge for an agglomerated DSP area. It argued that the developer charge for this area should be the same as it would be if all the individual service areas were combined and the charge was calculated from first principles. It contended that if agglomeration is to occur, the average charge for the resulting DSP area should be weighted by the present value of ETs in the individual service areas.

³³ DEUS Circular: LWU 5, 28 September 2004 (see appendix F).

³⁴ MidCoast Water submission, p 12.

³⁵ Water Directorate submission p7.

3.4.3 IPART's response and recommendations

IPART considers that allowing service areas to be agglomerated under a single DSP on the basis that their calculated capital charges are broadly similar reduces the nexus between the development covered by the DSP and the assets required to service the development. This is because agglomerated service areas are not required to have geographic proximity or shared assets. Agglomeration can also blur the locational pricing signals that developer charges should send, and lead to inefficient investment outcomes.

However, IPART also recognises that agglomeration increases the simplicity of developer charges regulation, by enabling LWAs to minimise their costs in setting and administering developer charges. This is particularly relevant for smaller LWAs, which have limited resources to administer developer charges. Given the above, it is clear that agglomeration represents a trade-off between simplicity and economic efficiency.

After consulting with the development industry and LWAs, IPART considers that the arrangements for agglomeration need to be improved, to strike a better balance between these stakeholders' views while also being mindful of economic efficiency. Both development industry and LWA stakeholders agree that a moderate level of agglomeration can enhance simplicity without significantly affecting the form and sequence of development.

IPART also considers that the additional clause approved in Director-General's circular could result in significantly distorted locational price signals. This is because it allows all service areas to be agglomerated, in contrast to the original Guidelines that only permitted agglomeration between service areas with calculated capital charges within 30 per cent of each other. The additional clause has also added complexity to the calculation of the developer charge, as it means that there are now several different ways that LWAs may agglomerate service areas. And while the circular does place a limit on agglomeration in high cost-high growth areas, it is not specified clearly enough to provide a binding Guideline.

Given the above, IPART considers that the circular should be removed and the Guidelines should be amended to clearly establish new arrangements for agglomeration. In IPART's view, there needs to be limitations to agglomeration, particularly for larger LWAs that have sufficient resources to administer a number of separate DSPs and developer charges. This will ensure that the developer charges they levy are more cost-reflective and provide more accurate price signals about the cost of developing particular areas. It will also result in more equitable outcomes, as the level of cross-subsidisation between development areas will be limited.

IPART considers that larger LWAs should be subject to the "30% Rule" for agglomerating service areas set out in the existing Guidelines. However, in order to reduce the burden of administering developer charges for smaller LWAs, these

LWAs should be allowed to agglomerate all their service areas and calculate a single weighted average charge for all new developments.

There should, however, be one exception to this: smaller LWAs should not include a service area within an agglomerated DSP if it is a high-cost area that would result in a weighted average developer charge (post agglomeration) that is more than 30 per cent higher than the pre agglomeration developer charge for any of the service areas included in the agglomeration.

In IPART's view this approach will provide both large and small LWAs with scope to agglomerate new service areas, and simplify the process of setting and administering developer charges for smaller LWAs. However, it will also limit the scope for substantial cross-subsidies between new development areas. IPART considers that new development should not be supported by substantial cross-subsidies and should only progress where it can pay its way.

In relation to the methodology for determining the developer charge for an agglomerated DSP area, IPART agrees with the development industry's comments that this charge should be weighted by the present value of total ETs in each of these areas.

Recommendation

16 That the Guidelines be amended to specify that in calculating the developer charge for a DSP area formed by agglomerating two or more service areas, the charge should be weighted by the Present Value of ETs in each service area.

17 That the Director-General's circular of 28 September 2004 be discarded and the existing Guidelines amended so that:

- LWAs with more than 2000 assessments are bound by section 3.3.2 in the existing Guidelines, in which they are allowed to agglomerate two or more service areas where the difference between the calculated capital charges for these areas is less than or equal to 30 per cent³⁶
- a LWA with 2000 or less assessments is generally allowed to agglomerate all its service areas and calculate a single weighted average developer charge for all new developments. However, it should not include a service area in an agglomerated DSP area if it is a high-cost area that would result in a developer charge (post agglomeration) that is more than 30 per cent higher than the pre agglomeration developer charge that would have applied for any of the service areas included in the agglomeration.

³⁶ The Guidelines use 2000 assessments as the threshold to distinguish between small and large LWAs for the purpose of selecting which reduction amount methodology to use (p33-34). IPART recognises that this definition may not necessarily reflect the level of resources that a LWA has available to administer developer charges. However, in the absence of detailed information on LWAs IPART is not in a position to offer an alternative definition so has chosen to continue with this threshold.

Box 3.1 Example of weighting agglomeration by the Present Value (PV) of ETs

The capital charges (CC) of two service areas, S1 and S2, are to be agglomerated. The following is an example of how to agglomerate correctly by the PV of ETs. As stated in Recommendation 17 above, the charge of service area two is within 30% of service area one's charge, so they may be agglomerated in accordance with section 3.3.2 of the existing Guidelines.

$$(1) CC_{S1} = \$20,000; (2) CC_{S2} = \$15,000$$

$$(3) PV ET_{S1} = 200, (4) PV ET_{S2} = 2500, (5) PV ET_{S1+S2} = 2700$$

$$(6) = (3)/(5) = 200/2700 = 0.074$$

$$(7) = (4)/(5) = 2500/2700 = 0.926$$

$$\text{Agglomerated charge} = (6)*(1)+(7)*(2) = (0.074*\$20,000)+(0.926*\$15,000) = \$15,370$$

Box 3.2 Example of agglomeration allowed for LWAs with less than 2000 assessments

Table 4 on page 93 of the Guidelines provides an example of determining the number of DSPs by agglomerating two or more service areas. The example uses service areas from Shoalhaven City Council, and demonstrates that agglomeration is allowed if the capital charges of the different areas are within 30 per cent. Under this approach four separate DSPs are required.

Recommendation 17 instead allows for 100% agglomeration of all service areas (in small LWAs) where the weighted average capital charge post-agglomeration does not exceed the pre-agglomeration capital charge of any of the agglomerated service areas by more than 30%. This is illustrated in an example in Table 3.1 below.

Using this example, the weighted average capital charge that would apply if all service areas were agglomerated into one DSP area is \$13,183. This would result in significant increases in the capital charge for a number of service areas. For example, it would increase the capital charge of service area G by 120% (from \$6,000). Recommendation 17 is designed to limit the scope for agglomeration where the revised charge is likely to have a significant impact on the charges for individual service areas.

If Recommendation 17 were applied it would enable the LWA to agglomerate service areas into, for example, two separate DSPs as illustrated below. Under this approach, the post-agglomeration charge for both areas C and G is less than 30% greater than the capital charge that would have applied for them without agglomeration, therefore the LWA has complied with IPART's recommendation. The LWA can therefore apply the charges of \$18,630 for DSP area 1; and \$7,712 for DSP area 2.

Table 3.1 Worked example of agglomeration method for LWAs with less than 2000 assessments

Service Area	Capital Charge (\$ per ET)	PV ETs in Service Area	% of PV ETs in DSP	Weighted Capital Charge (\$ per ET)	Difference between agglomerated charge and Service Area charge*
	(1)		(2)	(1)x(2)	
A	30,000	200	22%	6,600	-38%
B	16,000	300	33%	5,280	16%
C	15,000	400	45%	6,750	24%
Total DSP 1		900	100%	18,630	
D	8,900	300	33%	3,026	-13%
E	8,800	200	22%	1,936	-12%
F	6,500	200	22%	1,430	19%
G	6,000	200	22%	1,320	29%
Total DSP 2		900	100%	7,712	

Note: Figures may not add due to rounding. *This column is the difference between the initial capital charge for the individual service areas and the final agglomerated charge for the relevant DSP area.

3.5 Return on Investment

Section 3.5 of the Guidelines specify how LWAs are to calculate the return on investment included in the capital charge, and the discount rate they are to use in this calculation. This reflects the fact that LWAs provide the upfront investment to fund the infrastructure and, therefore, are entitled to receive a commercial return on those assets. As stakeholders did not raise any concerns in relation to this section of the Guidelines, IPART considers that the current arrangements are appropriate.

3.6 How the capital charge per ET should be calculated

The Guidelines outline two methodologies for calculating the capital charge per ET. These are the return on investment (ROI) approach, and the spreadsheet approach (also known as the Net Present Value or NPV approach, or the IPART approach). The Guidelines state that “the two methods give the same results and utilities may use either”.

3.6.1 Stakeholders’ response

UDIA expressed the view that the two methods for calculating the capital charge per ET only give the same results under a limited set of assumptions that seldom hold true in practice (particularly the assumption that the take-up of development lots is uniform through time). UDIA supported the use of the NPV approach for calculating the capital charge per ET. It noted that:

ROI is potentially easier to use because it does use the total cost in a fairly straight forward calculation ... It is highly error prone, but it would be ideal probably for the smaller councils. It is virtually impossible to check. That is why it is really not suitable for major councils because it is not a rigorous process. It is an approximation process³⁷.

Several larger LWAs, including Port Macquarie Hastings Council, also supported the use of the NPV approach on the grounds that it is better suited to their circumstances.

As far as the capital charge goes, we have no problem with larger councils having the NPV approach³⁸.

However, smaller LWAs preferred the ROI approach, as they believe it is simpler to apply.

³⁷ Transcript Port Macquarie public workshop, 18 June 2007, p 98.

³⁸ Tim Molloy, Port Macquarie public workshop, 18 June 2007, p 103.

3.6.2 IPART's response and recommendations

IPART agrees with UDIA's view that the NPV and ROI approaches do not produce consistent results in all circumstances. In addition, IPART considers that the spreadsheet or NPV approach is a more accurate approach. It also notes that its use is consistent with the IPART methodology used by metropolitan water utilities. For these reasons, it considers that it would be preferable for all LWAs to use this approach.

However, IPART also recognises that for smaller LWAs, the NPV approach may not be feasible. Therefore it proposes that most LWAs should be required to use the NPV approach, while small LWAs should be encouraged to use the NPV approach but may use the ROI approach. IPART considers that a 'small LWA' should be defined as one with fewer than 2000 water and/or sewerage assessments. It notes that this is consistent with the Guidelines' definition of a small council, and represents approximately the smallest 41 councils in NSW.³⁹

In addition, IPART considers that the Guidelines should incorporate a table of the ROI factors to simplify the use of this methodology and ensure consistency in application of ROI factors.

Recommendation

18 That the Guidelines be amended so that in general, LWAs are required to use the NPV (or spreadsheet) approach in calculating the capital charge per ET, as this approach represents best practice and is a more accurate methodology. Only LWAs that have fewer than 2000 water and/or sewerage assessments may use the ROI approach for this calculation.

19 That the Guidelines include a table of ROI factors.

³⁹ DWE supplementary submission, p 6.

4 | Calculating the reduction amount

The reduction amount represents the portion of the efficient cost of assets used to service a development that the LWA expects to recover through the periodic water and sewerage bills it will levy on its customers over the life of those assets. To ensure that LWAs do not recover the same costs twice, the capital charge is reduced by this amount to determine the developer charge. The reduction amount can also be defined as the net present value of the future net operating profits (or losses) expected from providing water-related services to the DSP area.

Chapter 4: *The Reduction Amount*, in the Guidelines sets out how the LWAs should calculate the reduction amount. Stakeholders raised a variety of concerns related to this chapter, including concerns about:

- ▼ the calculation methods that may be used
- ▼ the requirement to use an iterative approach in this calculation
- ▼ the requirement to exclude the cost of backlog works from this calculation.

The sections below discuss each of these concerns and set out IPART's response and recommendations for each.

4.1 Calculation methods that may be used

The Guidelines allow LWAs to choose one of three methods to calculate the reduction amount – the NPV of Annual Charges method, the direct NPV method, and the Under 2000 Assessments method. The Guidelines explain each method in detail, and provide the exact equation that is to be used for each. The methods are summarised in Table 4.1 below.

Table 4.1 Calculation methods for the reduction amount

Method	Concept	Features
NPV of Annual Charges	The reduction amount is calculated as the NPV of the future net income from annual charges (income less operation, maintenance and administration costs) for the development area.	<ul style="list-style-type: none"> ▼ Transparent ▼ Similar to IPART method used by metropolitan agencies ▼ Requires a 30 year financial plan
Direct NPV	The reduction amount is calculated as the renewal works and works to improve standards per ET, plus part of the net debt of the utility per ET	<ul style="list-style-type: none"> ▼ Simpler to calculate than NPV of annual charges as it uses mostly available data – suitable for LWAs that have not yet completed a 30 year financial plan ▼ Less transparent
Under 2000 Assessments	The reduction amount is 50% of the capital charge	<ul style="list-style-type: none"> ▼ Simplest ▼ Recommended for LWAs expecting only low or moderate growth, as the method overstates the reduction amount.

Source: The Guidelines, p 33.

4.1.1 Stakeholders' comments

The development industry was critical of the flexibility provided by the Guidelines in calculating the reduction amount. UDIA described the range of methods allowed by the Guidelines as “complex and confusing”, and the Association of Consulting Surveyors NSW (ACS) put the view that “the reduction amount is the most manipulated part of the process”⁴⁰.

The development industry supported the use of the NPV of Annual Charges method. For example, UDIA argued that this method uses data from LWAs' operational statement of income and expenditure, so should be simple for them to use (even though the Guidelines indicate that the other methods are simpler). Harper Somers O'Sullivan, submitted that:

Adoption of the NPV (spreadsheet) process not only allows for simpler and clearer DC charge calculation but allows easier data entry.

Once the model has been created it is a relatively straight forward task...to update data to reflect new, current, future data⁴¹.

⁴⁰ Submission, p 9.

⁴¹ Submission May 2007, paragraph 4.5.

However, LWAs and the NSW Water Directorate supported the choice of methods provided by the Guidelines. The NSW Water Directorate submitted that in relation to calculating the reduction amount, it preferred the simplicity provided by the Guidelines to the IPART method used by metropolitan water utilities because:

... water authorities are in no better position now to be able to separate the revenue and costs attributable to new development areas than they were 10 years ago.⁴²

LWAs also commented that a move towards the IPART method of calculating the reduction amount would increase complexity, as they did not understand the IPART method.

4.1.2 IPART's response and recommendations

IPART prefers the NPV of annual charges method for calculating the reduction amount because it is more accurate than the other methods. IPART also notes that this method is similar to the IPART methodology used by metropolitan water agencies, and is DWE's preferred method.

The Guidelines specify that to use the NPV of annual charges method, a LWA needs to have completed a 30-year financial plan. However, this requirement appears only to be relevant where the 'iteration' process is used (see section 4.2 of this report). Without iteration, the method involves a present value calculation including ET uptake, operation, maintenance and administration (OMA) costs, and current annual charges from new customers. As this is a fairly straightforward calculation, using data that should be readily accessible to LWAs, IPART considers that the larger LWAs should use this method.

In fact, Section 4.1.1 of the Guidelines now requires larger LWAs to use this method, as it specifies that:

By the second round of DSPs (2007-2009), water utilities with over 2000 assessments will be required to calculate the reduction amount using the NPV of Annual Charges method, which is more transparent and therefore more effective in communicating with the community and the development industry.

In addition to being more transparent than the other two methods, the NPV of Annual Charges method is also more cost reflective. The NPV method reduces the capital charge by an amount that directly relates to contribution annual charges will make to the recovery of capital costs. In contrast, under the Direct NPV and Under 2000 Assessments methods, the capital charge is reduced by an amount that bears little relationship to this contribution. This adds to the complexity and reduces transparency of the Guidelines.

Given the above, IPART considers that the option to use the Direct NPV and Under 2000 Assessments methods to calculate the reduction amount should be removed from the Guidelines. Larger LWAs (those with more than 2000 assessments) should

⁴² Water Directorate submission, p 7.

be required to use the NPV of Annual Charges method, but without the need to have completed a 30 year financial plan. Smaller LWAs (those with less than 2000 assessments) should be required to use a simplified version of this method.

The simplified version of the NPV of Annual Charges method considers the revenue and OMA from one ET only, so there is no need to accumulate the revenues from future customers or calculate the present value of ETs. Under this method, the reduction amount equals the present value for 30 years of current revenue per ET less the current operating expenditure per ET. This method is simpler than the NPV of Annual Charges method, and will result in a reduction amount that better reflects the contribution to capital cost recovery that the LWA's annual charges makes than either the Direct NPV method or Under 2000 Assessment method.

Recommendations

- 20 That the requirement for LWAs to have completed a 30-year financial plan in order to use the NPV of Annual Charges method to calculate the reduction amount be removed from the Guidelines, and all LWAs with more than 2000 assessments be required to use the NPV of Annual Charges method.
- 21 That the option for LWAs to use the Direct NPV method and Under 2000 Assessments method to calculate the reduction amount be removed from the Guidelines, and LWAs with less than 2000 assessments for either their water or sewerage businesses be given the option to use the following simplified NPV of Annual Charges method to calculate the reduction amount:

$$R_S = PV_{30\text{yrs}} \left(\text{Current Rev}_{\text{perET}} - \text{Current OMA}_{\text{perET}} \right) \quad (\text{Equation 1})$$

Where

R_S = simplified reduction amount

$PV_{30\text{yrs}}$ = Present value discounted over 30 years

$\text{Current Rev}_{\text{perET}}$ = the current revenue for an ET in the LWA area

$\text{Current OMA}_{\text{perET}}$ = the current operation, maintenance and administration costs per ET in the LWA area

Box 4.1 Example of the Simplified Reduction Amount method

Current Revenue per ET⁴³ = Total LWA revenue from fixed and usage charges/Total ETs currently served by LWA = \$600

Current OMA per ET = Total OMA/Total ETs currently served by LWA = \$500

Therefore: operating surplus per ET = \$600 - \$500 = \$100

The PV of \$100 for 30 years using a discount rate of 7% = \$1328

Therefore the Simplified Reduction Amount for this example is **\$1328**.

4.2 Iteration of the reduction amount

The Guidelines require the LWAs to use iteration to overcome the circularity between developer charges and annual charges when using the NPV of Annual Charges method:

...the level of developer charges affects the annual revenue which affects the reduction amount which in turn affects the level of developer charges. Therefore an iterative approach to the calculation is required.⁴⁴

4.2.1 Stakeholders' comments

The iteration process within the reduction amount was a particularly contentious issue for stakeholders at this review. For example, the UDIA and ACS strongly opposed the use of iteration in using the NPV of Annual Charges method to calculate the reduction amount. Their principal concern is the use of DWE's financial modelling program, FINMOD, to undertake this calculation.⁴⁵ ACS submitted that:

- The model does not provide the same outcome as water authorities' actual financial plans do, where separate systems are kept
- The FINMOD model is run by the DSP consultant in many cases specifically for the purpose of iterating the reduction amount.⁴⁶

The UDIA argued that calculation of capital charges and annual charges use a completely different financial method, so cannot be combined (as occurs during iteration). In addition, it said that the iteration:

...method artificially constrains the rate income and shifts cost to the development charge, by reducing the discount/net revenue offset.⁴⁷

⁴³ Where an ET is defined as a single detached dwelling, see Recommendation 25.

⁴⁴ DWE Guidelines, 4.2.2, p 35.

⁴⁵ Section 4.2.4 of the Guidelines implies the use of FINMOD in undertaking this calculation, although it is not an explicit requirement.

⁴⁶ Association of Consulting Surveyors submission, p 10.

⁴⁷ UDIA NSW, *NSW Regional Development Servicing Plans Principles Study*, December 2006, p 23.

In contrast, LWAs generally agreed that iteration is necessary as it recognises the circularity between annual charges and developer charges, whereas the IPART method used by the metropolitan utilities does not. There is a general concern that the balance of rates and developer charges is far more volatile for LWAs than it is for metropolitan utilities. For example, MidCoast Water submitted that it:

...is concerned that fixing prices will remove this flexibility and encroach on our ability to deliver the best strategic outcomes for our customers and community⁴⁸.

DWE also objected to the removal of the iteration process. It argued that a failure to balance developer and periodic charges will allow developers to argue that they should pay a reduced charge when the agency next increases its periodic charges.

4.2.2 IPART's response and recommendation

IPART considers the iteration process should be removed from the calculation of the reduction amount when using the NPV of Annual Charges method. While developer charges and annual charges are circular, IPART considers that iteration unnecessarily complicates this calculation, and reduces both simplicity and transparency. Instead, IPART considers that LWAs should use their existing periodic charges to calculate the reduction amount. This is consistent with the IPART method used by the metropolitan water agencies.

In IPART's view, because developer charges are only calculated once every five years, any adjustment to balance developer charges revenue and periodic charges revenue is better done through a review of periodic charges once the developer charge is known. As LWAs set their periodic charges annually, the revenue balance acquired through iteration will be made redundant when periodic charges are changed.

Similarly, the uncertainty surrounding the take-up of new development, and hence developer charges revenue, reduces the significance of trying to perfectly balance the two through iteration. In addition, the final step in the Guidelines before the developer charge is introduced allows reduction of the charge by way of a cross-subsidy with existing customers. Reducing the developer charge with cross-subsidies makes the iteration process redundant, as the revenues from developer charges and periodic charges will change from that calculated using iteration.

One strategy to improve the accuracy of the developer charge without iteration would be to re-calculate periodic charges immediately prior to reviewing developer charges. Using known annual charges to calculate the reduction amount instead of the additional iteration process will enhance the simplicity and transparency of the Guidelines.

⁴⁸ MidCoast Water submission, p 13.

Recommendation

22 That the Guidelines be amended to remove the requirement for LWAs to use the iteration process when calculating the reduction amount using the NPV of Annual Charges method, and instead require LWAs to use the periodic charges that are in operation at the time of the developer charges review to calculate the reduction amount.

4.3 Adjustment of the reduction amount for backlog works

Backlog water and sewerage works are works undertaken by LWAs to provide water-related services to properties that are already developed but don't have these services. The NSW Government subsidises some of the capital cost LWAs incur in undertaking these works. However, the remainder of the costs must be recovered from either those connecting to the works or from the LWA's other customers.

The Guidelines specify that where a DSP area includes backlog works, the LWA should exclude the projected capital and operating costs of planned backlog works when calculating the reduction amount.

Section 4.4.1 of the Guidelines states:

The adjustment would be done by financial modelling for the business without the capital and operating costs for the projected backlog works, and using this data for calculating the Reduction Amount. Excluding such works would result in a smaller reduction amount and higher developer charge.

4.3.1 Stakeholders' comments

The development industry's main concern about the treatment of the costs of backlog works in calculating developer charges related to whether LWAs should be able to agglomerate service areas that include planned backlog works with service areas that don't.

The only comments related to the treatment of backlog works in calculating the reduction amount were from some development industry stakeholders, who commented that they would prefer LWAs not to use DSP-specific operating costs in this calculation. They argued that system-wide average operating costs should be used, because DSP-specific operating costs tend to be inaccurate as LWAs' financial modelling is only suited to calculating system-wide average costs. They also argued that the difference between the two cost figures is likely to be small, so it's not worth using DSP-specific operating costs.

4.3.2 IPART's response and recommendation

IPART considers that where backlog works in a DSP area impose operating costs above (or below) the system-wide average costs, LWAs should be able to use these costs in calculating the reduction amount for that DSP area. Different DSP areas within a LWA's operating area often have different operating costs – for example, because of different economies of scale, or the varying levels of sewerage treatment required in different locations. Using the operating cost specific to the DSP area enhances the cost reflectivity of the final developer charge. The Guidelines already cater for such cases: section 4.4.3 states that the reduction amount may be increased or reduced where operating costs in a DSP area are different to the system-wide average costs.

IPART considers that LWAs should calculate the reduction amount for DSP areas that include backlog works using the same approach they use for DSP areas without backlog works. That is, they should use the operating costs specific to that DSP area when calculating the reduction amount. For this reason, IPART considers that section 4.4.1 of the Guidelines should be removed.

Recommendation

23 That the Guidelines be amended to remove section 4.4.1, and to specify that where a DSP area has operating costs different to the system-wide average costs due to planned backlog works, LWAs may calculate the reduction amount using the operating costs specific to the DSP area, as is already suggested in section 4.4.3 of the Guidelines.

5 Determining the number of equivalent tenements

An equivalent tenement (ET) is a measure of the demand that each development places on the water and sewerage system it is connected to. Development lots within a DSP area can be used for a range of purposes, including residential properties such as home units and houses, and non-residential properties such as shops, restaurants, motels, and industrial sites. These different types of development place different levels of demand on the water and sewerage system, and so should attract a correspondingly different developer charge.

So that the cost of providing water and sewerage services within a DSP area can be divided between the different types of development, the LWA determines the total number of ETs within the DSP area. It then divides the capital charge and reduction amount by the total number of ETs in the DSP area, to give the developer charge per ET. When a property connects to the system, the LWA assesses how many ETs that property represents based on its expected annual water demand, and levies the appropriate charge on the developer. (For example, the charge for a 10 ET property will be 10 times the charge for a 1 ET property.)

Attachment 5 of the Guidelines addresses how LWAs should determine the total number of ETs within a DSP area and assess the number of ETs that different property types represent. The attachment defines the number of ETs in terms of revenue from annual rates and charges on the basis that a single house represents one ET.

5.1 Stakeholder comments

The development industry is concerned that the Guidelines do not provide sufficient or consistent guidance about how to determine the number of ETs in a DSP area. For example, at one of IPART's public workshops, the UDIA representative commented that the Guidelines talk a lot about ETs but "there is no definition really up-front about how they are calculated".⁴⁹

Some LWAs also expressed the need for more extensive discussion on the calculation of ETs in the Guidelines. For example, Port Macquarie Hastings Council commented that it "recognises the need for more detailed guidelines being established on how LWAs should calculate ET".⁵⁰

⁴⁹ Mr Chris Taylor, representative for UDIA NSW. Port Macquarie public workshop, 18 June 2007.

⁵⁰ Port Macquarie - Hastings Council submission p 9.

There are also mixed views on how ETs should be defined. UDIA argued that an ET should be defined as the average annual demand that it places on the system, rather than as the annual water charges it attracts, or its peak demand:

What we're after is equivalence – how much water is being used and how much does it cost to deliver it. And the only way we can get that is if we look at demand on an average basis...⁵¹

UDIA also argued that:

...it is not an appropriate basis to calculate ETs on an annual rate and charges, but the point being that, for argument's sake, a house with a pensioner is calculated at 0.87 of the annual charge for a house, which might be right on what people pay, but it has no comparison with what might actually be used in that place.⁵²

Representatives from some LWAs and DWE commented that the calculation of ETs should consider the peak and average factors that are used to design the water systems. They argued that the different loadings placed on the system by residential and non-residential development can then be apportioned in the following way:

You apportion them on the ratio of their peak demand and their annual demand. So one particular industry, say in your example, it can be 38 per cent of the annual demand, but it might only be 10 per cent of the peak day demand; therefore the share of assets involved has to be shared on that basis.⁵³

However, the NSW Water Directorate's publication, *Section 64 Determinations of Equivalent Tenements Guidelines*, offers a different definition of ETs. This document states that:

A Standard ET is considered to be the demand or loading a development will have on infrastructure in terms of the average water consumption or average sewage discharge for an average residential dwelling or house, based on state-wide data.⁵⁴

The Water Directorate's definition is consistent with the IPART methodology used by metropolitan water utilities, which defines ETs according to average consumption (demand).

Development industry stakeholders also put the view that some LWAs' failure to use reliable growth projections to determine the total number of ETs has resulted in significant errors. They also noted that mistakes have been made in determining the number of ETs represented by non-residential demand. For example, developers claimed that Bega Valley Council calculated that non-residential ETs represented 17 per cent of the total number of ETs, whereas the DEUS Performance Comparisons for 2003-04 indicated that non-residential users represented 48 per cent of the

⁵¹ Mr Peter Price, representative for UDIA NSW. Nowra public workshop, 1 June 2007, transcript p 91.

⁵² Mr Chris Taylor, representative for UDIA NSW. Port Macquarie public workshop, 18 June 2007, transcript p 106.

⁵³ Mr Sam Samra, representative for DWE. Nowra public workshop, 1 June 2007, transcript p 96.

⁵⁴ NSW Water Directorate, *Section 64 Determinations of Equivalent Tenements Guidelines*, January 2005, p 5.

demand for potable water in that area. It is unclear if this discrepancy is solely due to a change in the land usage profile between existing and new development.

Given that ETs are a result of population growth and occupancy rates, UDIA emphasised that ETs should be calculated with regard to the latest planning information. It stated that:

The calculation of ETs as a demand factor should be based upon a proper demographic analysis for residential development.⁵⁵

The ACS also noted that in the Guidelines:

There is no guidance as to how water authorities might undertake a demographic analysis and thence determine the number of ETs. The IPART Guidelines (determination) require analysis using Department of Planning or ABS data.⁵⁶

5.2 IPART's response and recommendations

IPART considers that calculating the total number of ETs is a fundamental component of the developer charges methodology. Therefore, it considers that the body of the Guidelines needs to discuss in detail how LWAs should approach this calculation.

For simplicity, and for consistency with the IPART methodology used by the metropolitan agencies, IPART considers that an ET should be based on the average annual demand of a single residential dwelling. The ET ratings for different types and densities of development, including non-residential, should be based on their average demand compared to that of a single residential dwelling. The total number of residential and non-residential ETs in the service area can then be calculated according to this definition.

In addition, in calculating the number of ETs, LWAs should have regard to demographic forecasts for the area. The IPART methodology for metropolitan agencies requires that agencies have regard to the latest planning statistics when calculating this number. LWAs should also use this information, particularly when assessing the likely residential development, to help to ensure that robust ET data is used in calculating developer charges.

The calculation of ETs should also take account of alternative technologies that may be applied in a development such as pressure sewerage systems, so as to ensure that the ET rating for properties using this technology accurately reflects their demand on the water or sewerage system.

⁵⁵ UDIA NSW submission, p 22.

⁵⁶ Association of Consulting Surveyors NSW submission, p 8.

IPART considers that it is not possible to include in the Guidelines each specific case where alternative technologies may be applied in a development. However, LWAs should consider these specific cases in calculating developer charges. In particular, IPART considers that where alternative technologies are used by a development, the ET loading of that development may be negotiated with the developer to reflect the demand that the development will place on the system.

The calculation of developer charges for non-residential properties is discussed further in Chapter 7.

Recommendation

- 24 That the Guidelines be amended to include greater discussion of how LWAs should calculate the number of ETs in a DSP area, and to require LWAs to have regard to the latest demographic statistics from the Australian Bureau of Statistics or the NSW Department of Planning in calculating this number.
- 25 That the Guidelines be amended so they clearly define an ET as the average annual demand of a single detached dwelling, and require LWAs to calculate the ET rating of all other development types, including non-residential, according to their average annual demand compared to that of a single detached dwelling.

6 Levying the developing charges

Chapter 5: *The Developer Charge* of the Guidelines outlines how LWAs may reduce the maximum developer charge they calculate under the Guidelines by subsidising the costs of providing water-related services to the development through existing customers' water and sewerage bills. It also describes how LWAs may phase in developer charges to reduce their potential impact on developers (and future buyers).

The sections below discuss stakeholders' comments and IPART's response and recommendations in relation to each of these matters.

6.1 Subsidising new development by increasing periodic charges

Section 5.2 of the Guidelines specifies that a LWA may choose to levy less than the maximum calculated developer charge on a developer, and instead recover some of the costs associated with the development through the periodic water and sewerage charges it levies on its broad customer base. In making this choice:

The water utility should consider financial, social and environmental factors to determine the level of developer charges that are balanced, fair and equitable. The underlying principle is that the new development should meet the full cost of assets serving the development, but consideration should be given to DSP areas where the calculated developer charges are unacceptably high.

A water utility exercising best practice management must levy developer charges in a commercial manner, whereby the cost distribution is equitable. A high level of cross-subsidy from existing customers is not considered to be best practice⁵⁷.

The Guidelines also require LWAs to calculate and publish the amount by which customers' annual bills will rise as a result of cross-subsidies to new developments.

6.1.1 Stakeholders' responses

LWAs strongly supported their ability to cross-subsidise development by increasing the periodic charges levied on existing customers. They argued that cross-subsidisation is critical, to enable them to compete for development with other regions, including those across state borders. They also argued that cross-subsidisation enables them to make social equity decisions, such as cross-subsidising expensive (often backlog) areas through charges levied on existing customers.

⁵⁷ DWE Guidelines, p 47.

DWE also argued that LWAs should have the ability to cross-subsidise high cost areas, particularly where these will result in environmental and community health benefits such as in backlog areas. It pointed out that LWAs have a mandate to undertake backlog works, practically regardless of cost, and it is better to subsidise the costs of these works through periodic charges than levy the full amount, which could discourage connection to new sewerage systems.

LWAs also indicated that they strongly object to publishing cross-subsidies on water bills. Their reasons include the expense involved; the fact that their billing programs are not capable of formatting additional information onto bills; that customers will not understand what developer charges are; and that the calculated cross-subsidies are only a guide and will depend on the development that actually occurs.

6.1.2 IPART's response and recommendations

IPART supports the underlying objectives, as stated in the Guidelines, that "new development should meet the full cost of assets serving the development". This is consistent with the objectives of cost reflectivity, efficient price signalling and equity.

IPART considers that LWAs should make their decisions on whether to invest in infrastructure to service a new development based on a robust economic appraisal. The economic appraisal of the project should also take account of the environmental, health and other benefits that could arise from the development. Development should only progress if it is economically feasible to do so.

In general, IPART is not in favour of LWAs investing in infrastructure to support development if that development cannot support the resulting charge. However, there are two cases in which some cross-subsidisation might be justified to support new development. One is where existing assets are at risk of being 'stranded' if the development does not proceed. In this case, there may be valid economic reasons to reduce the calculated developer charge. If so, the value of the existing assets should be written down or written off as a loss when calculating the developer charge, as these assets were poor investments. The question then is how the LWA should recover this loss – from its existing water and sewerage customers or the Council's general fund?

In a normal commercial business, the loss suffered as a result of poor investment decisions would flow through to shareholders via the profit and loss account. With LWAs, the position can be somewhat different as they can pass losses onto existing customers through increased water and sewerage tariffs.

If existing assets are assigned a reduced or zero value in calculating the developer charge, the LWA will not recover the costs of these assets from the developer, and the resulting loss will be retained by the water fund and paid for by existing customers through increases to tariffs. Alternatively, the loss could be recovered from the LWA's shareholder, which is the Council's general fund. This could be

achieved by Council's general fund paying the water fund for the capacity of the poor investment that is deemed to be unrecoverable.

In practice, given that most ratepayers are also water customers, there would be limited benefit in shifting the loss to the Council's general fund, except that it would signal to Councils that investments in high-cost areas should not be subsidised. However, there is likely to be considerable opposition to this approach from Councils, due to 'rate pegging'. Given these circumstances, IPART considers that the most viable option is to retain the loss of the unrecoverable assets in the water fund.⁵⁸ This option will also be the most administratively simple, given that there is no need to calculate the exact amount of loss payable to the water fund by Council.

The second case where cross subsidies might be justified is where substantial benefits are realised to the whole community by servicing an area with water or sewerage infrastructure. LWAs argued that this is often the case in backlog sewerage areas. IPART recognises the need to share the costs of providing sewerage services in backlog areas in a way that recognises the benefits accruing to those receiving these services as well as the substantial public health and environmental benefits that arise from backlog sewerage programs. In response to the high cost of backlog works, and the public benefits they provide, the NSW Government provides a partial subsidy for the cost of installing backlog works that service properties that existed in 1996. The LWA must however recover the remaining costs of the scheme through either contributions, periodic charges or developer charges.

IPART considers that new development in DSP areas that include backlog works should pay the full cost of service as they have a choice of whether they connect to the system. In contrast, IPART believes it is acceptable to subsidise the cost of servicing existing development in backlog areas as they are required to connect to the system despite having a cheaper alternative if they continued with their existing service arrangements. See Chapter 8 of this report for further discussion of how to calculate developer charges in DSP areas that include backlog works.

Given the above, IPART considers that in levying developer charges for DSPs registered in 2008/09, LWAs should be required to ensure that the cost of future assets (ie, those planned for commissioning after 2008/09) are fully recovered through those developer charges. However, LWAs should be able to continue to write down the value of pre-2008/09 assets in calculating developer charges (so that the costs of these assets are recovered from existing customers). This will enable LWAs to continue cross-subsidising existing assets on a temporary basis. But over time, this requirement will phase in full cost recovery as pre-2008/09 assets become less and less significant in the total asset pool.

⁵⁸ Some LWAs have also noted that they may not be legally able to access the Council's General Fund for the purpose of subsidising new development.

In relation to LWAs' objections to publishing cross-subsidies for development on water bills, IPART notes that one of COAG's (and its own) principles for pricing water services is that any subsidy incorporated into prices should be transparent. IPART considers that while publishing, in DSPs and the utility's annual report, the amount that annual bills will rise as a result of cross-subsidies for development goes part of the way towards making this cross-subsidy transparent, it is not readily accessible to the majority of water rate payers. To make the cross-subsidy additionally transparent, IPART considers that the impact of the cross-subsidy on periodic water charges should be disclosed and explained on Councils' websites, in a prominent position.

Recommendations

- 26 That the Guidelines be amended to specify that in levying developer charges for DSPs registered in 2008/09 and beyond, LWAs are required to ensure that the cost of future assets (i.e. - those planned for commissioning after 2008/09) are fully recovered through those developer charges. However, LWAs may write down the value of pre-2008/09 assets in calculating developer charges (so that the costs of these assets are recovered from existing customers).
- 27 That the Guidelines be amended to require that the impact of cross-subsidies for development on periodic water and sewerage charges be prominently disclosed and explained on Council websites, to further enhance the transparency of this cross-subsidisation.

Box 6.1 Example of how the value of existing assets should be written down to take account of cross-subsidies

IPART recommends that only pre-2008/09 assets may be cross-subsidised with periodic charges. Post-2008/09 assets should be fully recovered from future development in order to send efficient pricing signals. This will enable LWAs to continue cross-subsidising existing assets on a temporary basis. Over time full cost recovery from new development will be phased in. The new process for LWAs to follow is outlined below:

1. Calculate the maximum service area charge according to the Guidelines.
 2. Agglomerate the appropriate service area charges according to the Guidelines.
 3. If the LWA believes that development may not take place due to the agglomerated charge being too high, then the LWA may recalculate each service area charge that needs to be reduced. This is done by changing the value of all pre-2008/09 assets in that service area charge to between 0% and 100% of their maximum value. At its minimum value, the service area charge would therefore recover only the full cost of post-2008/09 assets.
-

6.2 Phasing-in developer charges

Section 5.3 of the Guidelines allows utilities to phase-in the maximum developer charge over 3 years if it is significantly higher than was previously levied. Stakeholders did not raise concerns with these provisions in the Guidelines. IPART considers that this guideline should now be removed for the following reasons.

By the time LWAs are required to implement the revised DWE Guidelines, they will have been using the current Guidelines for more than the 3 year phase-in period so charges should be at their maximum level.

When the Guidelines were first introduced, there was a need for a progressive transition to higher charges if LWAs had been using a different methodology that gave a lower charge. Now that this need has expired, the change to using a new methodology is no longer a valid reason to have a phase-in guideline.

The Tribunal considers that risk will be shared appropriately between the LWA and the developers without the phase-in guideline. As the developer must pay the developer charge before receiving a development approval certificate, they can decide against developing if they consider the charge is too high. Only if the construction had commenced and then the developer charges were levied would there be a valid case to allow a phase-in of charges as the LWA could then affect the development decision after works had begun.

Recommendation

28 That section 5.3 of the Guidelines, *Phasing-in Developer Charges*, is removed.

7 Calculating developer charges for non-residential development

Chapter 6: *Developer Charges for Non-Residential Development*, of the Guidelines sets out the approach for calculating developer charges for non-residential developments. Under this approach, the capital charge is described as the sum of two capital charges: the costs of assets designed to meet peak day demand, and the costs of assets designed to meet average day demand. This is different to the capital charge component of developer charges for residential developments, which is calculated as the sum of all assets without regard to whether they were designed for peak or average demands.

7.1 Stakeholders' comments

Stakeholders made few comments on the approach for calculating developer charges for non-residential properties. However, the UDIA commented that:

The DWE Guidelines make no allowance for the proper calculation of non-residential ETs which should be based upon comparative annual demand.⁵⁹

The water system is providing for a whole raft of users and the cost of a whole asset base ought to be apportioned over all users, that's fair, that's what's intended, but its not being achieved. The question we had was how you determine the number of non-residential users as well as the residential users.⁶⁰

7.2 IPART's response and recommendation

IPART considers that a water network is a 'club good', and the calculation of developer charges should reflect this. A club good is a good where it is more cost-effective for all potential users to combine in acquiring a good or service than it is for them to rely on independent provision. Therefore, the whole cost of providing water and sewerage services to a DSP area should be spread over all the different types of development in that area, according to the demand each type places on the system. This means that developer charges for residential and non-residential development should be combined and set through the same calculation, as together they form the total demand on the network.

⁵⁹ UDIA NSW submission, p 22.

⁶⁰ Peter Price, UDIA NSW representative. Nowra public workshop, 1 June 2007, p 91.

For consistency between residential and non-residential development, IPART considers that the calculation should consider all types of development together. All ETs and assets should be calculated together for both the capital charge and reduction amount. Only in this way will costs be allocated correctly and so send efficient pricing signals about the different forms of development.

Recommendation

29 That Chapter 6 of the Guidelines be removed and instead the calculation of the developer charge should consider all residential and non-residential development together in assessing the total number of ETs for each DSP area.

Box 7.1 Example of ET ratings for non-residential developments

An ET is defined as the average annual demand of a single detached dwelling. Other development types, such as commercial and industrial, should be assigned an ET rating according to their average annual demand compared to that of a single detached dwelling.

The following table shows an example of water demands and the corresponding ET ratings for various types of development.

Development Type	Annual Demand (kL)	ET rating
1 Bedroom unit	115	0.5
Standard residential lot	230	1
Restaurant	2300	10
Nursing home	11500	50
Factory	23000	100

For example, say a DSP area is designed for 10 one bedroom units, 20 houses, 1 restaurant, 1 nursing home and 2 factories. By multiplying the ET rating of each development type by the number of each development type in the DSP area and adding them all together, the total number of ETs in that area would be 285ET.

8 Other issues

Stakeholders raised two other issues that don't relate to matters explicitly covered in the current version of the Guidelines. The first relates to the calculation of developer charges for DSP areas that include backlog works. The second relates to the use of alternative technologies by developers to service their developments. Each of these issues, and IPART's response and recommendations are discussed below.

8.1 Calculation of developer charges for areas that include backlog works

LWAs undertake 'backlog works' to provide water and sewerage services to developed properties that don't currently have these services. Under the Country Towns Water Supply and Sewerage Program, the NSW Government provides subsidies to help pay the cost of serving backlog properties existing at 1996. The balance of the cost must be met by the LWA, either through contributions from benefiting properties, through periodic water and sewerage charges, and from developer charges.

When LWAs provide water and sewerage services to a backlog area, it allows future development in that area to connect to the system as well. This means the infrastructure provided to service the backlog properties needs to provide additional capacity, to meet the demand created by this future development. It is more economical to provide this additional capacity when the backlog works proceed, as future development is likely to be dispersed around and within the backlog areas.

The existing Guidelines do not thoroughly address the treatment of backlog works in relation to developer charges, except to specify that the costs of these works should be excluded when calculating the reduction amount (see Chapter 4 of this report).

8.1.1 Stakeholders' comments

The UDIA argued that the high costs of servicing backlog areas are being included or averaged with developer charges for new development areas:

The DEUS approach is to cross-subsidise new development in more expensive areas (via agglomeration) including backlog areas which are subsidised by the state government.⁶¹

⁶¹ UDIA NSW submission p 14.

The UDIA also put the view that LWAs are not accounting for state government subsidies correctly:

The excluding of subsidy from income calculations means that new dwelling users are in effect paying twice...if the backlog areas are removed from the DSPs, this effect will be substantially reduced.⁶²

However, Tim Molloy of Port Macquarie Council stated that in his opinion:

It is agreed that backlog works should have contributions calculated as for ordinary DSPs however no offset should be provided. Government subsidies only cover 50% for the backlog works with Council funding the remaining costs. If Council contributes additional funds for growth ETs Council should be able to recoup the full amount from new development. If any of the cost for new ETs is offset by the subsidy then existing ratepayers will in effect be funding infrastructure for new works. The opportunity for new development in backlog areas only occurs as a result of considerable financial cost by Council in funding half of these works. Council should not be further burdened by subsidising growth ETs.⁶³

In its submission DWE stated that LWAs only receive a NSW Government subsidy for the cost of servicing properties that existed in 1996. The capital cost of servicing any new development that arrives after 1996 must be fully funded by the LWA. Given that LWAs pay the full cost of servicing new properties before development occurs, it is reasonable that the NSW Government subsidy for backlog works is not deducted from the total cost of assets when calculating the developer charge. In this way new development pays their full cost of service through the developer charge.

8.1.2 IPART's response and recommendation

IPART agrees with Tim Molloy's comment that existing ratepayers should not be funding infrastructure for new developments in backlog areas. The issue of cross-subsidies from existing ratepayers to fund new development is a major issue for this review, and is discussed in Chapter 6 of this report.

In addition, IPART considers that the developer charge for backlog areas should be calculated like the charge for any other area; that is, the present value of existing and future assets serving the area should be divided by the present value of ETs less the reduction amount per ET. However, in backlog areas, the NSW Government provides a subsidy for the cost of providing water and sewerage services for 'backlog' properties that existed at 1996 and the LWA bears the full cost of providing services to ETs that are constructed after 1996. The extent to which existing development in backlog areas benefits from the government subsidy depends on how the LWA recovers the cost of servicing those properties. It may recover the remaining cost of servicing backlog properties using a combination of contributions and periodic charges from existing customers.

⁶² UDIA NSW submission p 16.

⁶³ Tim Molloy, Port Macquarie-Hastings Council, pers. comm, 31 July 2007.

However, new developments that will occur after the DSP is next reviewed should be charged developer charges in accordance with the Guidelines. As the government subsidy for backlog works is allocated on the basis of existing properties at 1996, IPART considers that future developments should not benefit from the subsidy. Therefore IPART has recommended that the total cost of assets which serve the 'backlog' area should be included in the calculation of developer charges. In this way new development that connects to 'backlog' systems will not benefit from the government subsidy.

IPART wishes to make it clear that because growth and backlog properties will connect to the same system, the capital charges for DSPs that include backlog works should be calculated like those for any other DSP area, as should the reduction amount. That is, the present value of the total cost of assets should be divided by the present value of the total number of ETs that the system will service, less the reduction amount per ET to give the developer charge. The developer charge per ET is then levied on new developments only. That is, new development, irrespective of whether it is located in a 'backlog' area, should pay the full cost of service through the developer charge.

Councils may choose to recover funds from backlog properties at their own discretion but this is an entirely separate issue to recovering the cost of new development in backlog areas using the developer charge. IPART does not support providing a subsidy for new developments in backlog areas.

Recommendation

30 That the Guidelines be amended to specify that in DSP areas that include backlog works, LWAs should calculate the developer charge in the same manner as for other DSP areas. The calculation should include the total system cost (NSW Government subsidies for backlog properties should not be deducted) and all ETs that the system will service (existing and new development). However, only new developments are required to pay developer charges in accordance with the Guidelines.

Box 8.1 Example of calculating the capital charge for a DSP area that includes backlog works

For example, say an existing village is being serviced with a 'backlog' sewerage network. In 1996 there were 100ETs and today in 2007 there are 110ETs. The LWA has designed the system to cater for a total of 500ETs, so the 'new' development is expected to be an additional 390ETs.

The total system cost is \$5m.

The LWA receives a NSW Government subsidy towards serving the development that existed in 1996, say the total subsidy is \$500,000.

The developer charge is calculated including the total system cost (\$5m) and all ETs (500) that the system will service. So using the NPV Method, the capital charge can be expressed as PV\$5m/PV500ETs. For example, say that was calculated to be \$12,000/ET. The new development of 390 ETs should be charged the \$12,000 per ET in accordance with the Guidelines. The shareholder Council(s) of the LWA may then be able to subsidise this amount in accordance with recommendation 26.

As the Guidelines do not cover cost recovery from existing development, the LWA would recover the remaining cost of servicing the existing 110ET through a combination of direct contributions from the existing properties and the wider community through periodic water and sewerage charges or Council's general fund.

8.2 Use of alternative technologies by developers

One stakeholder raised the issue of alternative forms of water and sewer service that may be implemented, which is not addressed in the current Guidelines. These alternative technologies may place less demand on the water or sewerage system than conventional technologies, so it may be appropriate for properties using such technologies to be assigned a lower ET rating.

8.2.1 Stakeholders' submissions

Ross Fraser Consulting provided a submission to this review in which he specifically discussed pressure sewer systems and their relationship to the calculation of developer charges.

Mr Fraser argued that pressure sewer systems have no ingress of water during wet-weather events and as a consequence, design of downstream infrastructure will allow many more connections than if conventional gravity sewers were used. He also argued that:

There is a sound case for the DWE Guidelines to be amended so that the sewerage headworks charge takes into account that, with pressure sewer, wet weather flows are not being delivered to the downstream infrastructure. This would, in many cases, significantly reduce sewer headworks charges. The principles that should be applied is one of being

charged for the fraction of the downstream infrastructure being used, and no more. The DWE Guidelines, in fact, are predicated on this very principle.⁶⁴

8.2.2 IPART's response

IPART acknowledges that alternative technologies may reduce the load the development places on the system in comparison to using conventional technology that the LWA would have installed itself. In such cases this may require additional negotiation between the LWA and the developer to determine whether the number of ETs assigned to the development needs to be re-assessed.

As an example, a development of 100 standard residential lots would be assigned 100 ETs and charged accordingly if using conventional gravity sewers. If the same development used alternative technologies, such as pressure sewer systems, and it was calculated that this reduced the load on the system by 20 per cent per ET compared to the conventional technology, then the development could be re-assessed and charged for only 80 ETs.

IPART considers that it is not possible to include in the Guidelines each specific case where alternative technologies may be applied in a development. However, LWAs should consider these specific cases in calculating developer charges. In particular, IPART considers that where alternative technologies are used by a development, the ET loading of that development may be negotiated with the developer to reflect the demand that the development will place on the system. This has been discussed further in Chapter 5 relating to ETs.

⁶⁴ Ross Fraser Consulting Pty Ltd, submission to Review of DEUS Developer Charges, p 2.



Appendices

A Summary of recommendations

- 1 That the Guidelines be modified to: 13
 - Require LWAs to make the background document referred to in paragraph 2.3.1 available for the duration of the public exhibition period, and to register this document with DWE, together with the DSP
 - Specify that the background document should be provided in electronic format (such as on a CD) upon request
 - Specify that the background document should include calculation models in EXCEL (or similar electronic spreadsheet) format, so that all components of the model can be investigated
 - Specify that the calculation models should include an asset list that provides:
 - a. Direct links to the NPV or RoI model calculations
 - b. The purpose of the asset (reticulation, trunk main, pump, reservoir, dam, etc)
 - c. Individual asset numbers that are cross-referenced to a DSP area map (where the agency has this information).
 - Specify that the background document should include a comprehensive explanation of how the total number of existing and forecast ETs was calculated, and an explanation of the comparative ET ratings for different classes of development.
- 2 That the Guidelines be modified so they specify that LWAs should make draft DSPs (excluding the detailed background documents) available on their website for the duration of the exhibition period, and make final DSPs available on their websites until they are replaced by a subsequent DSP. 14
- 3 That the Guidelines be modified to specify that LWAs are required to have all DSPs reviewed by an accredited auditor before they submit them to DWE for registration, and to provide the auditor's report to DWE (along with the DSP and other documents specified in section 2.4 of the current Guidelines). 16
- 4 That DWE establish a process for accrediting auditors, and prepare a comprehensive checklist for use by these auditors. The checklist should enable the auditors to check that the DSP complies with the Guidelines. 16
- 5 That the Guidelines continue using the CPI to index developer charges between reviews, and there be no change to the conditions for conducting reviews of DSPs. 18

- 6 That an expert technical panel be formed to advise the Director-General of DWE on technical matters or issues of interpretation in relation to the Guidelines. This panel should include representatives from DWE, IPART, the NSW Water Directorate, local water authorities and the development industry. 21
- 7 That DWE approach EWON to discuss the possible use of EWON's services as part of the dispute resolution process specified in the Guidelines. 21
- 8 That the Guidelines be modified to specify that, each time a DSP is reviewed, assets that will be more than 30 years old at the commencement of the DSP must be excluded from the capital charge. 27
- 9 That the Guidelines be modified to specify that where a LWA seeks to include headworks assets in the capital charge that will be older than 30 years at the commencement of the DSP, it will need to produce documentation to justify this inclusion. The documents must show that when the asset was constructed it was planned to provide capacity for growth into the current DSP period. This document should be considered by DWE in the first instance, and possibly referred to the Expert Panel by the Director General of DWE if stakeholder consultation is required, before the assets are approved to be included in the DSP. 27
- 10 That the Guidelines be modified to specify that only future assets to be constructed within 5 years of the commencement of the DSP should be included in the capital charge, and that in order to gain an exemption from this 5-year rule, LWAs need to demonstrate there is a clear nexus between the future assets concerned and the development and provide detailed plans that establish that the assets will be built as and when forecast. 29
- 11 That the Guidelines continue to require all LWAs to calculate a developer charge for each DSP area that excludes all reticulation assets. 31
- 12 That the Guidelines be modified so that LWAs also have the option of calculating a second developer charge that includes the reticulation assets paid for by the LWA, and can levy this second charge on developers that have not provided their own reticulation (such as in-fill development and development in backlog areas). 31
- 13 That the Guidelines continue to specify that existing assets be valued using MEERA values, but be modified to ensure that contingencies are not included in this valuation. 32
- 14 That the Guidelines be modified to specify that the valuation of future assets should be on a MEERA basis. 33
- 15 That the Guidelines be modified to specify that the allowance for contingencies included in the valuation of future assets do not exceed 20 per cent. 33
- 16 That the Guidelines be amended to specify that in calculating the developer charge for a DSP area formed by agglomerating two or more service areas, the charge should be weighted by the Present Value of ETs in each service area. 37

- 17 That the Director-General’s circular of 28 September 2004 be discarded and the existing Guidelines amended so that: 37
- LWAs with more than 2000 assessments are bound by section 3.3.2 in the existing Guidelines, in which they are allowed to agglomerate two or more service areas where the difference between the calculated capital charges for these areas is less than or equal to 30 per cent
 - a LWA with 2000 or less assessments is generally allowed to agglomerate all its service areas and calculate a single weighted average developer charge for all new developments. However, it should not include a service area in an agglomerated DSP area if it is a high-cost area that would result in a developer charge (post agglomeration) that is more than 30 per cent higher than the pre agglomeration developer charge that would have applied for any of the service areas included in the agglomeration.
- 18 That the Guidelines be amended so that in general, LWAs are required to use the NPV (or spreadsheet) approach in calculating the capital charge per ET, as this approach represents best practice and is a more accurate methodology. Only LWAs that have fewer than 2000 water and/or sewerage assessments may use the ROI approach for this calculation. 41
- 19 That the Guidelines include a table of ROI factors. 41
- 20 That the requirement for LWAs to have completed a 30-year financial plan in order to use the NPV of Annual Charges method to calculate the reduction amount be removed from the Guidelines, and all LWAs with more than 2000 assessments be required to use the NPV of Annual Charges method. 46
- 21 That the option for LWAs to use the Direct NPV method and Under 2000 Assessments method to calculate the reduction amount be removed from the Guidelines, and LWAs with less than 2000 assessments for either their water or sewerage businesses be given the option to use the following simplified NPV of Annual Charges method to calculate the reduction amount: 46
- $$R_S = PV_{30\text{yrs}} \left(\text{Current Rev}_{\text{perET}} - \text{Current OMA}_{\text{perET}} \right) \quad \text{(Equation 1)}$$
- Where
- R_S = simplified reduction amount
 - $PV_{30\text{yrs}}$ = Present value discounted over 30 years
 - Current $\text{Rev}_{\text{perET}}$ = the current revenue for an ET in the LWA area
 - Current $\text{OMA}_{\text{perET}}$ = the current operation, maintenance and administration costs per ET in the LWA area
- 22 That the Guidelines be amended to remove the requirement for LWAs to use the iteration process when calculating the reduction amount using the NPV of Annual Charges method, and instead require LWAs to use the periodic charges that are in operation at the time of the developer charges review to calculate the reduction amount. 49

- 23 That the Guidelines be amended to remove section 4.4.1, and to specify that where a DSP area has operating costs different to the system-wide average costs due to planned backlog works, LWAs may calculate the reduction amount using the operating costs specific to the DSP area, as is already suggested in section 4.4.3 of the Guidelines. 50
- 24 That the Guidelines be amended to include greater discussion of how LWAs should calculate the number of ETs in a DSP area, and to require LWAs to have regard to the latest demographic statistics from the Australian Bureau of Statistics or the NSW Department of Planning in calculating this number. 54
- 25 That the Guidelines be amended so they clearly define an ET as the average annual demand of a single detached dwelling, and require LWAs to calculate the ET rating of all other development types, including non-residential, according to their average annual demand compared to that of a single detached dwelling. 54
- 26 That the Guidelines be amended to specify that in levying developer charges for DSPs registered in 2008/09 and beyond, LWAs are required to ensure that the cost of future assets (i.e. - those planned for commissioning after 2008/09) are fully recovered through those developer charges. However, LWAs may write down the value of pre-2008/09 assets in calculating developer charges (so that the costs of these assets are recovered from existing customers). 58
- 27 That the Guidelines be amended to require that the impact of cross-subsidies for development on periodic water and sewerage charges be prominently disclosed and explained on Council websites, to further enhance the transparency of this cross-subsidisation. 58
- 28 That section 5.3 of the Guidelines, *Phasing-in Developer Charges*, is removed. 59
- 29 That Chapter 6 of the Guidelines be removed and instead the calculation of the developer charge should consider all residential and non-residential development together in assessing the total number of ETs for each DSP area. 62
- 30 That the Guidelines be amended to specify that in DSP areas that include backlog works, LWAs should calculate the developer charge in the same manner as for other DSP areas. The calculation should include the total system cost (NSW Government subsidies for backlog properties should not be deducted) and all ETs that the system will service (existing and new development). However, only new developments are required to pay developer charges in accordance with the Guidelines. 65

B Summary of stakeholders' comments

As part of this review IPART released an Issues Paper, which invited interested parties to submit their views on the Guidelines. The Issues Paper also raised a number of specific matters and requested comment on these matters.

Stakeholders offered a wide range of views on the broad issues of applying the Guidelines as well as specific technical matters raised in the Guidelines. Stakeholders also responded to specific issues raised in IPART's Issues Paper for this review. The key themes from the submission are discussed below.

B.1 Local water authorities are satisfied with the existing guidelines as it gives them flexibility

Overall the LWAs expressed satisfaction with the existing Guidelines. In particular the LWAs put the view that the Guidelines are sufficiently simple for them to adhere to while also providing them with a large amount of flexibility and discretion. The LWAs value the ability to levy developer charges that are below the calculated maximum developer charge that would be set if costs were to be fully recovered from developers.

B.2 LWAs support allowing a high degree of cross-subsidisation of the developer charges

The Guidelines provided several mechanisms that a LWA may choose to use to calculate its Developer Charges so that the costs of development are recovered from developers, but these methods are only used to determine the maximum charge that may be levied. The Guidelines permit LWAs to set developer charges at any level below the calculated maximum provided any cross-subsidy is disclosed. It is apparent from the submissions from LWAs that there is a high degree of cross-subsidisation of developer charges taking place, with the funding shortage often being recovered from existing customers through periodic water and sewerage charges.

Many of the LWAs consider that they must compete for development through upfront developer charges particularly in less desirable areas. Port Macquarie-Hastings Council stated that if it "were to apply the maximum charge it would restrict and possibly completely stifle new development in these areas and limit council's ability to recover any of the high cost of infrastructure needed to supply

small isolated areas".⁶⁵ These sentiments are echoed in a number of other submissions from LWAs.

The LWAs consider it is their right to fund any shortage in developer charges through periodic water and sewerage bills, and this appears to be the preferred option rather than funding the shortage from the Council's general fund.

B.3 The development industry would like to see the IPART methodology adopted across the state to give LWAs less flexibility

In contrast to the LWAs views expressed above, the development industry would prefer to see a uniform approach to the setting of developer charges implemented across the state in order to provide certainty and consistency to developers. For example, the Urban Development Institute of Australia (UDIA) stated that "the most significant failure of good governance arising from the Guidelines has been the lack of accountability and transparency".⁶⁶ The industry's preferred approach is the core of the IPART methodology that is used by the four metropolitan agencies to calculate developer charges.

B.4 The development industry is of the view that some developer charges are over-recovering

The development industry put the view that in areas that developers consider desirable, LWAs are using the flexibility of the Guidelines to levy excessive charges that are then passed on to homebuyers. The Association of Consulting Surveyors (ACS) stated:

the claims for charges in a number of local areas are substantially more than a fair and reasonable amount...It is a concern that DEUS and local government may see the housing industry as also an additional source of funds enabling local government to mend their budgets"⁶⁷

The ACS also claimed that some LWAs levy developer charges from three to 14 times the median charges for water and sewerage headworks in the Sydney metropolitan area.

The development industry suggested that this is possible due to the flexibility built into the Guidelines. For example, the industry noted that there are several methods of calculating the developer charge that a LWA can choose from, in addition to scope to make various assumptions regarding inputs such as which assets to include in the calculation and how to measure the number of properties the development will service.

⁶⁵ Port Macquarie-Hastings Council submission p 3.

⁶⁶ UDIA submission, p 4.

⁶⁷ ACS submission, p 1.

B.5 Simplicity

IPART's Issues Paper sought comment on whether the Guidelines currently meet the objective of being simple to apply, or whether they could be simplified further. The UDIA put the view that simplicity has not been achieved, and pointed to errors in DSPs that LWAs have prepared, the reliance on consultants in this field and the lack of understanding of the calculations required by the staff of LWAs. One LWA acknowledged that "the various methods permitted within the Guidelines can add unnecessary complexity"⁶⁸. Others stated that they wanted to retain the option of using the more complex methods if they choose to do so. For example, Port-Macquarie-Hastings Council commented that smaller councils do not have the resources to allow the use of more complex methodologies but at the same time larger councils may choose to use more complex methods; the flexibility to choose between simple and complex methodologies needs to be maintained⁶⁹. Overall, submissions valued simplicity and stakeholders would not like to see the Guidelines made more complex.

B.6 Transparency

IPART's Issues Paper asked for comment on whether there was a need for greater transparency in the Guidelines, and how improvements could be made. The LWAs overwhelmingly held the view that, if followed properly, the Guidelines resulted in a sufficiently transparent process, and any greater transparency would be cost prohibitive for LWAs. One LWA stated that the process was transparent but that "the complex nature of the calculations and the general public's inability to understand much of the detail will lead to a feeling of a lack of transparency"⁷⁰. The development industry expressed the view that more background information to the calculations was required, for example access to electronic versions of spreadsheets and asset registers.

B.7 Consistency of charging across NSW

The Issues Paper sought comment on whether a common approach to the calculation of developer charges across the state was appropriate, and if so whether the IPART methodology should be used. While the development industry supported the use of the IPART methodology across the state to enhance certainty and consistency, the LWAs appear to be resistant to a uniform methodology as they value the flexibility of the Guidelines. Shoalhaven City Council stated that "it is very difficult to understand the IPART methodology"⁷¹.

⁶⁸ Shoalhaven City Council submission p 2.

⁶⁹ Port Macquarie-Hastings Council submission, pp 1-2.

⁷⁰ Port Macquarie-Hastings Council submission, p 2.

⁷¹ Shoalhaven City Council submission p 5.

B.8 Cost reflectivity

IPART sought comment on issues associated with cost reflectivity and whether LWAs should have the right to balance developer charges with periodic charges. LWAs argued that it is their right to manage their charges to suit the needs of their areas, and lower developer charges may be necessary to encourage development. A number also argued for cross-subsidisation of developer charges for this reason. The development industry noted that this results in the distortion of price signals and can lead to inefficient development.

B.9 Treatment of subsidies

The Issues Paper sought comment from stakeholders on how subsidies should be treated. Submissions from LWAs indicated that it is common practice to cross-subsidise developer charges from periodic water and sewerage charges. The development industry again pointed to the resulting inefficient development of high cost areas.

B.10 Regulatory oversight

IPART sought comment on whether the compliance and dispute resolution processes included in the Guidelines needed strengthening. LWAs indicated that these provisions were adequate, but the development industry expressed the view that the dispute resolution processes were too loose and subject to interpretation. EWON suggested that independent dispute resolution through themselves should be made available under the Guidelines, as is the case for the metropolitan providers.

C Objectives for regulating developer charges

As part of its review, IPART considered the objectives that developer charges levied by LWAs should aim to meet. In doing so, it took account of the objectives of the IPART methodology used by the four metropolitan water authorities to set developer charges, and the commitments NSW has made as part of the Council of Australian Governments (COAG) in relation to water pricing. IPART concluded that the regulation of developer charges should meet seven broad objectives: full cost recovery, effective price signalling, appropriate risk sharing, equity, simplicity, transparency and consistency. Each of these objectives is discussed below.

C.1 Full cost recovery

One of the objectives of the IPART methodology and COAG's water pricing reforms is that prices for water services should recover the full efficient costs of providing the service. This is important to ensure that the water authorities responsible for providing these services have adequate revenue and are financially viable.

Typically, the full efficient costs of providing water-related infrastructure to new developments include the following:

- ▼ the costs of major infrastructure works (existing and planned) serving the development
- ▼ some of the costs of assets that have a nexus (or close connection) to the new development, based on the proportion of those assets serving the development
- ▼ an appropriate return to cover the risk borne by the authority that is providing the infrastructure.

The developer charge for each new development should reflect the proportion of the service capacity of existing and future assets that the development uses or will use. However, only those assets that have a clear nexus to the development should be included in calculating the charge, and water agencies should be required to demonstrate this nexus. This test will help to ensure that developer charges do not over-recover costs.

In relation to existing assets, it is also important that developer charges do not recover more than these assets are worth. If the initial capital investment was a poor investment, then these costs should not be included in the developer charge calculation. In other words, the developer charge should not require developers (and their customers) to pay for the cost of inefficient investments.

Similarly, old assets (more than about 30 years) should not be recovered from development occurring today as they were planned for and recovered by existing development. Therefore any remaining capacity in old assets should be considered economically 'sunk', and be provided free of charge to new development in order to encourage use of that capacity.

C.2 Effective price signalling

Regulation should aim to ensure that developer charges provide effective signals about the cost of development in different locations to encourage economically efficient development. Most water authorities in NSW have adopted postage stamp periodic charges for water and sewerage services. This means that these periodic prices do not signal the diversity in the cost of providing services in different locations. Therefore, the regulation of developer charges needs to allow differential charges for different development areas, to signal the true cost of development in those areas. This is important as it affects the value of land, both developed and undeveloped, and drives efficiencies in the form of development that takes place in different areas.

C.3 Appropriate risk sharing

Water authorities install the infrastructure required to provide water and sewerage services before the land is developed. They only start to receive a return on their investment when the land has been developed and connected to this infrastructure. In general, new urban release areas are fully developed within a period of 5 to 10 years, so the water authorities can expect to fully recover their investment over this period via the collection of developer charges. However, there is always a risk that the development will take longer than expected. If this occurs, the infrastructure may be under utilised for several years and it will take the water authority a considerably longer time to recover its investment.

Developers also make significant upfront investments, including purchasing the land, preparing the development site (eg, installing reticulation and stormwater assets) and paying the developer charge once the site is connected to the water authority's assets. They only begin to receive a return on their investment when blocks of land are sold to homebuyers. The rate at which blocks will be sold is uncertain, and if it takes longer than expected, it will take the developer a longer time to recover its investment.

Regulation should aim to ensure that developer charges appropriately share the risks associated with providing water-related infrastructure between the water authorities and the developers. This will help to encourage efficient development, by creating incentives for both parties to make sound investment decisions.

C.4 Equity

In general, regulation should aim to ensure that it leads to outcomes that are fair, as well as efficient. In relation to the regulation of developer charges, IPART considers that the objectives of full cost recovery and effective price signalling (discussed above) contribute to equitable outcomes, because they ensure that those consumers who choose to buy land in areas that require more expensive infrastructure are required to pay for that infrastructure.

It could also be argued that these objectives conflict with equitable outcomes. For example, ensuring that developer charges reflect the full efficient costs of providing water-related infrastructure will increase the cost of a block of land in development areas where these costs are higher, and this will reduce the affordability of housing in these areas. If the developer charge were set at less than the full efficient costs of providing the infrastructure it would improve this affordability.

However, if this were to occur, it is likely that the water authority would recover the shortfall in its revenue from its broad customer base. In other words, existing customers would be required to subsidise the cost of servicing land in the new development. IPART questions whether this would be an equitable outcome.

In addition, IPART notes that the developer charge is only one factor that influences housing affordability. Ultimately the price of housing depends on both supply-side and demand-side factors. The developer charge is likely to be only a small proportion of the final price paid by home buyers. Further, the purchasers of land and houses in the new development areas will not necessarily be low-income householders. Therefore, the provision of 'discounted' developer charges is not necessarily warranted.

IPART considers using the developer charge as a mechanism to influence housing affordability is likely to be a 'blunt economic instrument'. In its view, it is more appropriate to deal with this issue through general Government policies that can target specific areas or groups where affordability is a concern.

C.5 Simplicity

In line with good regulatory practice, the regulation of developer charges should be simple to administer, to ensure that its costs do not outweigh its benefits. This objective is particularly relevant to the regulation of developer charges levied by LWAs, as many of these authorities have limited data and resources available for administering the pricing regime.

At the same time, IPART considers that simplicity should not come at the expense of the other objectives for regulating developer charges. That is, if the current regulation compromises the full recovery of efficient costs, effective pricing signalling, and risk sharing, for example, then alternative approaches may be needed.

C.6 Transparency

Also in line with good regulatory practice, the regulation of developer charges should be transparent to all interested parties. That is, all parties should be able to understand the Development Servicing Plans (DSPs) and how the developer charges related to each DSP are calculated. To achieve transparency, the regulation needs to ensure that LWAs provide sufficient quality and quantity of information to other stakeholders – such as information on:

- ▼ the system assets and capacity included in the developer charge calculation
- ▼ the MEERA values of these assets
- ▼ cost information
- ▼ how the Equivalent Tenements have been calculated.

C.7 Consistency

Finally, the regulation of developer charges should aim to ensure that a consistent approach is used to calculate the developer charges levied by all water authorities in NSW, including LWAs and the four metropolitan authorities. IPART recognises that the approach for calculating developer charges levied by LWAs requires more flexibility than the IPART methodology used by the metropolitan authorities, to accommodate the diverse conditions the LWAs face. Nevertheless, a sufficiently consistent approach is required so that stakeholders can be confident that the developer charges calculated by LWAs are fair and reasonable.

D Overview of the current guidelines

The Guidelines specify methodologies that LWAs are permitted to use when calculating developer charges for water, sewerage and stormwater services. They are based on the methodology adopted by IPART in its developer charges determination for Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council. However, this methodology has been simplified for ease of calculation and adoption by the LWAs. The result of this is that the Guidelines provide several options that LWAs may use when calculating their developer charges.

This appendix provides an overview of the current Guidelines, including the concept on which the calculation of developer charges is based, a summary of how the Guidelines calculate and specify developer charges, and how this approach differs from the IPART methodology used by the metropolitan water agencies.

D.1 The developer charges concept

The concept on which the calculation of developer charges in the Guidelines is based is the net present value (NPV) approach adopted by IPART for the four metropolitan water utilities. The fundamental principle of the NPV approach is that the investment in assets for serving a development area is fully recovered from the development, through a combination of up-front charges (the developer charges) and periodic charges. This approach allows future costs and revenues to be reconciled to a single value by discounting them to today's dollars. NPV is a standard tool for making investment decisions and is widely accepted and understood.

The Guidelines note that while they are based on the NPV approach in the IPART determination, they involve a number of simplifications to make them suitable for use by the LWAs.⁷²

D.2 Overview of the guidelines

The Guidelines specify the developer charge as:

The NPV of the cost of existing and future assets used to service the development area (the Capital Charge).

Less the NPV of the future net operating profits (or losses) expected from providing the services to the development area (the Reduction Amount).

⁷² DWE Guidelines, p 3.

This can also be written as:

$$\text{Developer charge (per ET)} = \text{Capital Charge} - \text{Reduction Amount}$$

(cost of providing the assets) (recovered through annual bills)

The developer charge is calculated as a per equivalent tenement (ET) charge. Each development is assessed by the LWA and given an ET rating, then billed accordingly for that number of ETs.

An ET is a measure of the demand a development will place on the infrastructure in terms of the water consumption and sewage discharge for an average residential dwelling. The Guidelines do not prescribe the way in which LWAs should quantify ETs; this differs from the IPART methodology, which specifies the demand per ET for each water agency that is to be used in applying its methodology.

The Guidelines provide different options for calculating the capital charge and the reduction amount. This differs from the IPART methodology, which sets a single formula-based methodology for use by all the major metropolitan water authorities to determine developer charges.

D.2.1 The levying of developer charges

LWAs are given authority to levy developer charges under the Local Government Act 1993 and are required to set developer charges according to the Guidelines. The Guidelines provide that the calculated developer charges are the maximum value that may be levied by a water utility to recover the costs associated with the provision of water and sewerage infrastructure to new developments. A utility may elect to charge less than the calculated amount provided that it discloses the resulting cross-subsidy from existing customers. In deciding to charge lower than the maximum, the Guidelines allow councils to consider financial, social and environment factors to determine balanced and equitable developer charges. LWAs are also permitted to phase in new developer charges over a three-year period.

Box D.1 Examples of developer charges adopted below the calculated maximum

The Port Macquarie-Hastings Council has resolved to levy developer charges for sewerage services well below calculated maximum developer charge for two of its three DSP areas. Page 12 of Hastings Council Development Service Plan for Sewerage March 2005 includes the following information:

DSP No.	DSP Name	Calculated Developer Charge (\$/ET)	Adopted Developer Charge (\$/ET)
1	Kew/Kendall	\$16,380	\$3,642
2	Dunbogan, Lake Cathie/Bonny Hills	\$7,305	\$3,642
3	Wauchope, Port Macquarie	\$3,441	\$3,242

The DSP goes on to indicate that the result of levying developer charges below the permitted maximum is an increase on annual bills of existing customers of 7.9 per cent.

The Guidelines also allow councils that have levels of growth below 5 ETs per year to forgo levying developer charges if they choose to do so. However, councils adopting this approach must prepare an exemption document reporting previous and forecast growth in ETs over the next 5 years.

D.2.2 Development servicing plans

Each developer charge must be calculated for a development servicing plan (DSP) area. If the LWAs have elected not to levy developer charges (ie, because they have levels of growth below 5 ETs per year), they are not required to prepare a DSP but must prepare a policy document that includes developer charges calculated according to the Guidelines to demonstrate the level of cross subsidy paid by existing customers to new developments.

For LWAs proposing to levy developer charges, the Guidelines specify that DSP areas should be established according to service areas. The Guidelines define service areas as:

- ▼ areas served by a separate water distribution system
- ▼ areas served by a separate sewage treatment works
- ▼ separate small towns or villages
- ▼ new development areas of over 500 lots.

The Guidelines require LWAs to exhibit DSPs for at least 30 working days before developer charges are implemented. The DSPs must include the following information:

- ▼ a summary of the contents of the DSP
- ▼ the name, area and basis for determining the boundaries of the DSP, as well as the timing for payment of charges
- ▼ demographic and land use planning information including estimated population and population forecasts
- ▼ timing of capital works
- ▼ standards of service and design parameters for the DSP area
- ▼ the calculated developer charge
- ▼ any cross subsidies
- ▼ reference to a background document containing information about how charges were calculated, commissioning dates, size/length of assets, MEERA valuation of assets, total asset capacity (in ETs and the number of ETs served in the DSP area)
- ▼ a reference to other relevant DSPs and to section 94 contribution plans.

The Guidelines specify that developer charges for each DSP should be reviewed every 5 to 6 years. After adoption of a DSP, developer charges should be adjusted for inflation each year.

D.3 Calculating the capital charge

The capital charge represents the efficient cost of assets used to service the development area. These costs are initially funded by the water authority. The Guidelines allow the inclusion of both existing and future assets in the calculation of developer charges.

The capital charge depends on the following factors:

- ▼ the time to full take-up of capacity
- ▼ the capital cost of the infrastructure
- ▼ the discount rate.

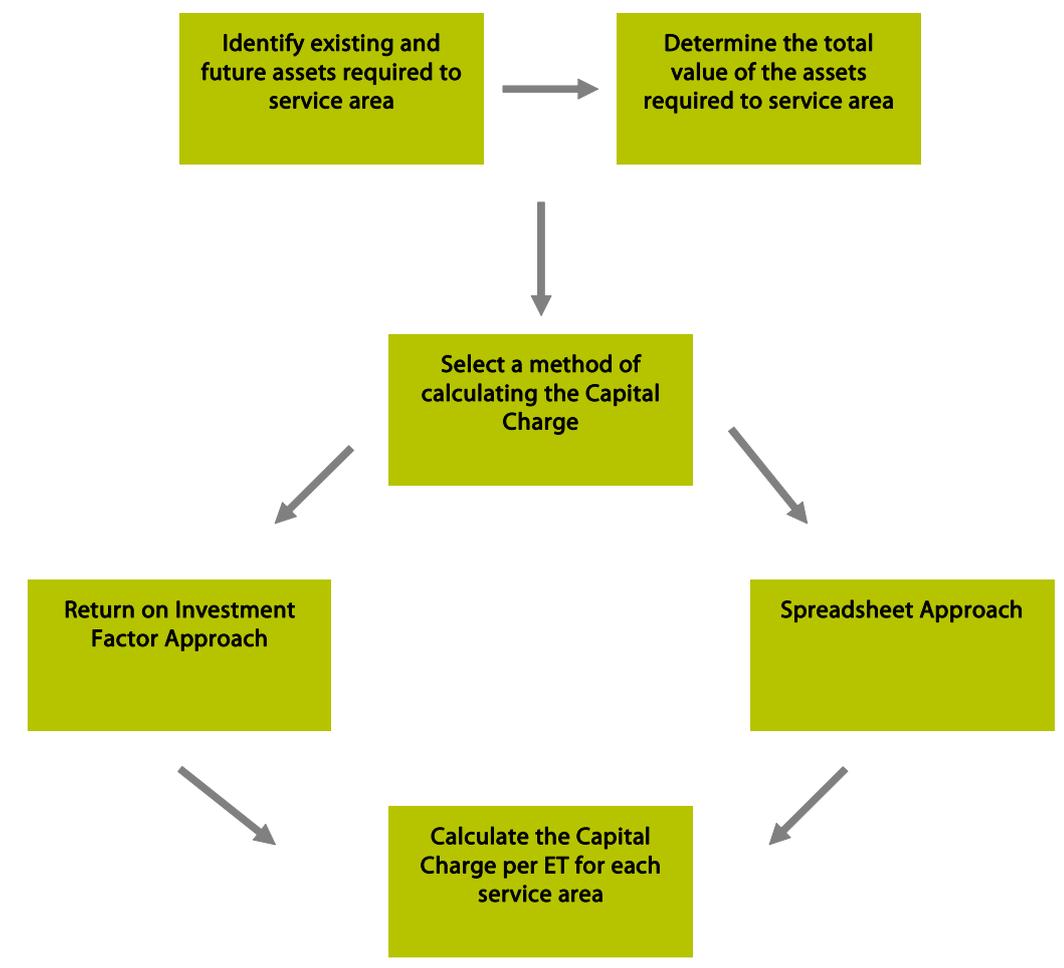
To calculate the capital charge LWAs must first estimate the time period until asset capacity is fully utilised (for both existing and future assets). If information is available this should be based on actual take-up rates. Alternatively, an average based on take-up rates for similar developments may be used.

LWAs must then determine the capital cost for assets serving various DSP areas. The Guidelines provide guidance on:

- ▼ which assets should be included in developer charge calculations
- ▼ how assets should be valued
- ▼ how the number of development servicing plan areas should be determined.

Figure D.1 shows the steps outlined in the Guidelines for the calculation of the capital charge.

Figure D.1 Steps involved in the calculation of the capital charge



D.3.1. Which assets should be included in developer charge calculations

The Guidelines stipulate that to determine the assets serving a development, the LWAs must:

- ▼ identify which assets, existing or future, are part of the system servicing a DSP area
- ▼ apportion assets that service more than one DSP area.

This is depicted as the first step in the diagram in Figure D.1.

For assets to be included in a developer charge, the LWA must demonstrate that there is a nexus, or close connection, between the development covered by the DSP and the asset. Table D.1 below outlines assets that may be included and excluded in the developer charge for a particular DSP area.

Table D.1 Assets to be included in developer charges

Group	Capital charge calculation
Existing assets	Include if they serve the new development. Exclude the capacity that is not expected to be utilised over the planning period. Exclude pre-1970s assets with the exception of water headworks system assets and sewerage major works.
Future assets	Include assets planned within the next 5 years. Include assets beyond 5 years if there is a clear nexus to the development.
Reticulation assets	Exclude
Future renewals	Exclude
Assets for out-of-sequence development	Exclude except where developer initially meets the full capital cost of these assets.

Where assets are shared by a number of DSP areas as part of a system, the Guidelines specify that the capital charge should be calculated for the system based on the expected system use. The asset cost must then be apportioned to each service area based on the expected demand in each area.

The existing assets that the Guidelines permit for inclusion in the calculation of developer charges differ to those allowable for inclusion under the IPART methodology. Specifically the IPART methodology excludes all pre-1970s assets because they were considered by IPART at the time of developing its methodology to have already been paid for, while the Guidelines make exceptions for water supply headworks system assets.

D.3.2 How assets should be valued

The Guidelines specify the valuation method for assets to be included in the capital charge. Specifically, that existing assets are to be valued according to the Modern Engineering Equivalent Replacement Asset (MEERA) cost. Future assets are to be valued from investigation/concept design reports.

D.3.3 Capital charge calculation methods

The Guidelines allow two methods for calculating the capital charge:

- ▼ the return on investment (ROI) approach
- ▼ the spreadsheet approach.

Return on Investment Factor Approach

While the Guidelines indicate that both methods “give the same results”, they state that the ROI approach is “simpler to use”. The ROI approach involves calculating the capital cost of servicing a development area and multiplying it by an ‘ROI factor’ to determine the capital charge. The ROI factor equates the present value of annual developer charges revenue to the capital cost, assuming a specific discount rate. The capital cost per equivalent tenement (ET) is the value of the relevant assets serving a development area divided by the capacity of the assets (in ETs). This approach allows LWAs to calculate developer charges that will recover capital costs plus a rate of return on investment over the planning period.

The Guidelines outline the method for calculating the ROI factor⁷³. This method assumes there is uniform take-up of lots in the development over time.

$$ROI = -PMT(r/100, t, 1) \times t / (1 + r/100)$$

Where

r = discount rate (%)

t = take up period

PMT() is a Microsoft Excel spreadsheet function which calculates the annual payment for a loan with constant payments and a constant interest rate.

To calculate the capital charge, the LWA must multiply the ROI by the capital cost (per ET) of servicing the development. This can be written as:

$$\text{Capital charge} = \text{capital cost per ET} \times \text{ROI factor}$$

⁷³ DWE Guidelines, p 23.

Spreadsheet Approach

The Guidelines also provide for a ‘spreadsheet method’ for calculating the capital charge where the take up of new lots is expected to be non-uniform. The spreadsheet method uses the same principles as IPART’s NPV approach. This involves dividing the present value of the capital cost associated with serving the development by the present value of the number of ETs. This can be written as:

$$\text{Capital charge} = \text{PV}(\text{capital cost}) \div \text{PV}(\text{number of ETs})^{74}$$

Discounting the number of ETs allows the calculation to incorporate non-uniform take-up of lots in a development. This smooths out ‘lumpy’ capital expenditure and rate of development.

D.3.4 Discount rate

The Guidelines specify the discount rates LWAs must use when calculating capital charges. These are shown in Table D.2 below.

Table D.2 Discount rates for calculating the capital charge⁷⁵

Assets	Time period for calculation	Discount rate
Pre-1996 assets	From January 1996 until the asset capacity will be taken up.	3%
Post-1996 assets	From commissioning date until the capacity will be taken up.	7%

These discount rates are the same as those specified in IPART’s developer charges methodology for the metropolitan water agencies. The discount rate reflects the opportunity cost to the agency of funding infrastructure works. In providing infrastructure prior to development, water agencies face several risks such as uncertainty of rate of development, changes in construction costs and changes in interest rates.

The discount rate of 7 per cent applied to post-1996 assets was based on the benchmark rate of return used in the periodic price determinations for the metropolitan water agencies. The lower discount rate for pre-1996 assets, reflected IPART’s view that agencies did not expect a full commercial return from developer charges prior to IPART’s determination in 1996.

⁷⁴ DWE Guidelines, p 23.

⁷⁵ DWE Guidelines, p 21.

D.3.5. Agglomeration of DSPs

The Guidelines note that LWAs should minimise the number of DSPs to reduce administration costs and simplify developer charges. Accordingly, they specify that where the capital charges for different DSPs are within 30 per cent of each other, charges should be agglomerated into a single DSP. Where DSPs are combined, the weighted average capital charge is calculated for the new DSP area according to the proportion of growth expected in the original service areas. DSPs do not have to be in geographical proximity in order to be combined, it is sufficient just that the calculated maximum developer charges of the service areas that are combined are within 30 per cent.

D.4 Calculating the reduction amount

The reduction amount is the net present value of the difference between expected operating revenue and expected operating costs associated with a development area. Its inclusion in the guidelines takes into account income received from periodic charges and avoids 'double dipping' (where the same costs are recovered through both periodic and developer charges).

The Guidelines establish three methods for calculating the reduction amount in the developer charges formula:

- ▼ the NPV of annual charges method
- ▼ the Direct NPV method.
- ▼ the Under 2,000 assessments method.

The Guidelines favour the NPV of annual charges method, but note that this approach requires LWAs to have robust business plans including 30-year financial plans. When the guidelines were released, many LWAs did not have this data, so the Direct NPV method was developed to simplify the calculation. The Guidelines note that by 2007-2009 all LWAs should have developed strategic business plans and therefore use the NPV of annual charges method.

The Under 2,000 assessments method may be used where the tariff area is smaller than 2,000 lots. For these LWAs the reduction amount is assumed to be 50 per cent of the capital charge. The Guidelines do not explain the basis for this assumption.

Each method of calculating the reduction amount is explained in more detail below.

D.4.1 NPV of annual charges method

This method involves calculation of the operating profit from periodic charges. This can be written as:

$$\text{Reduction amount} = \text{PV}(\text{annual charges revenue}) - \text{PV}(\text{operating costs})^{76}$$

The operating costs should be based on the most efficient and lowest cost means of providing the service. To calculate the reduction amount per ET, it should be divided by the present value of the number of ETs expected to connect to the system over the planning horizon.

Where LWAs have postage stamp periodic charges, a single reduction amount may be calculated for the whole system.

The Guidelines advocate an iterative approach for determining the reduction amount. This involves:

1. calculation of weighted average capital charges over all DSP areas
2. assumption of an initial reduction amount and calculation of the developer charge using this assumption
3. long term financial modelling to obtain projections of the required annual revenues and operating costs based on the developer charges from 2 above
4. calculation of the reduction amount resulting from these projections of revenues and costs for each year of the projection
5. comparison of the calculated reduction amounts in 4 above with the input reduction amounts in 2 above
6. revising the input reduction amounts to those calculated in 5 and repeating steps 3 to 5 until the output reduction amount for the first 5 years is within 2 per cent of the input reduction amount.

This iterative approach represents a significant departure from IPART's developer charges methodology. IPART's approach involves setting periodic charges based on efficient capital and operating costs and then calculating the reduction amount (or operating surplus) based on the revenue from these periodic charges. As LWAs are not subject to determination of periodic prices by IPART, these are instead calculated by the LWA itself in the context of total revenue needs of the business, hence the need for the iterative approach.

Within IPART's methodology for the metropolitan water agencies, all forecast capital expenditure (for the existing system and for growth) is added to the regulatory asset base (RAB). As developer charges are recovered, the RAB is adjusted downwards to reflect this revenue. In this way, the RAB acts as an adjustment mechanism to ensure that agencies recover the costs of running the business.

⁷⁶ DWE Guidelines, p 35.

D.4.2 Direct NPV method

The direct NPV method for calculating the reduction amount relies on different principles to the NPV of annual charges method. The Guidelines state that the rationale for the direct NPV approach is that in the long term, developer charges should recover the capital cost of serving a development area less the present value of future renewals expenditure. Thus, this alternative allows for a reduction amount equivalent to the renewals expenditure, with allowance also for expenditure on works to improve standards and recovery of that part of any debt which is serviced by annual charges. This can be written as:

$$\text{Reduction amount} = \text{PV}(\text{renewals expenditure}) \text{ per ET} + \text{PV}(\text{works for improving standards}) \text{ per ET} + \text{Part of net debt serviced by annual charges per ET}^{77}.$$

D.4.3 Under 2000 Assessments method

The Under 2000 Assessments method may be used for LWAs or tariff areas with fewer than 2000 assessments. The Guidelines note that this method is not cost reflective. This alternative involves LWAs adopting a reduction amount equivalent to 50 per cent of the capital charge, ie:

$$\text{Reduction amount} = 0.5 \times \text{capital charge}$$

D.5 Comparison with IPART's methodology

Table D.3 below presents a comparison of some of the key elements of the developer charges methodology in the Guidelines with IPART's methodology for metropolitan water agencies.

Many of the differences in the developer charges methodologies can be attributed to the nature of the Guidelines, when compared to IPART's determination. A fundamental difference between the Guidelines and the IPART methodology is that the Guidelines take a more light handed approach to regulation, and are intended to be more flexible and allow the LWAs more discretion. IPART's methodology is part of a legally binding determination, and is therefore of a more prescriptive nature. IPART's methodology is only intended to apply to the four metropolitan agencies and therefore the extent of flexibility and discretion built into the Guidelines was not necessary.

⁷⁷ DWE Guidelines, p 38.

Table D.3 Comparison between the guidelines and IPART’s methodology

	The Guidelines	IPART Determination
Existing assets	<p>Include if they serve the new development</p> <p>Exclude capacity not expected to be utilised over planning period</p> <p>Exclude pre-1970s assets but water headworks system assets and sewerage major works allowed</p>	<p>Include if they serve the new development</p> <p>Exclude capacity not expected to be utilised by growth development</p> <p>Exclude all pre-1970s assets</p>
Future assets	<p>Include assets planned within approximately next 5 years</p> <p>Assets planned beyond 5 years allowed if nexus to development</p>	<p>Include assets planned provided there is a nexus to development</p>
Valuation of assets	<p>Existing assets valued using MEERA</p> <p>Future assets valued from design reports</p>	<p>Existing assets valued using MEERA</p> <p>Future assets valued by estimate of efficient costs</p>
Calculation of capital charge	<p>Choice of two methods:</p> <ul style="list-style-type: none"> ▼ ROI approach ▼ Spreadsheet approach (essentially a NPV approach) 	<p>NPV approach</p>
Discount rate	<p>Pre-1996 assets 3%</p> <p>Post-1996 assets 7%</p>	<p>Pre-1996 assets 3% for Sydney and Hunter; 0% for Gosford and Wyong</p> <p>Post-1996 assets 7%</p>
Agglomeration of DSPs	<p>Permitted where capital charges of DSPs are within 30% of each other</p>	<p>Not allowed</p>
Reduction amount	<p>Choice of three methods:</p> <ul style="list-style-type: none"> ▼ NPV of annual charges which is an iterative approach where the reduction amount is the difference between the PV of periodic revenue and the PV of operating costs ▼ Direct NPV method, where the reduction amount is the sum of the PV of renewals expenditure, works for improving standards and part of net debt ▼ Under 2,000 assessments method where reduction amount is simply 50% of capital charge 	<p>NPV of the difference between the expected operating revenue and expected operating costs</p>
Equivalent tenements	<p>LWAs to determine demand per ET</p>	<p>Tribunal prescribes demand per ET for each agency</p>

E Terms of Reference for the review

TERMS OF REFERENCE

The *Water Supply, Sewerage and Stormwater Developer Charges Guidelines* were issued pursuant to section 306(3) of the *Water Management Act 2000* in December 2002 for calculating cost-reflective developer charges for water supply and sewerage infrastructure in non-metropolitan New South Wales.

The Guidelines provide a methodology for calculating the maximum developer charge. Each local water utility has discretion to levy lower charges than those calculated providing it discloses the resulting cross subsidy.

The Guidelines include a number of simplifications to the Independent Pricing and Regulatory Tribunal's Determination 9, 2000 on Developer Charges for the major metropolitan utilities, in order to make them suitable for use by 107 local water utilities in country New South Wales.

1. The Independent Pricing and Regulatory Tribunal (IPART) is requested, under section 9 of the *Independent Pricing and Regulatory Tribunal Act 1992*, to review the *Water Supply, Sewerage and Stormwater Developer Charges Guidelines* and provide recommendations for any improvements.
2. IPART is to provide a final report to the Minister for Water Utilities by 30 September 2007.

F Additional agglomeration guidelines



DEPARTMENT OF ENERGY,
UTILITIES AND SUSTAINABILITY
NEW SOUTH WALES GOVERNMENT

APPENDIX A
Leadership in energy and water sustainability
for New South Wales

Circular No. LWU 5
Date 28 September 2004
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Additional Agglomeration Options for Section 64 Development Servicing Plans (DSPs) for Water Supply and Sewerage

Background

In January 2003, the then Minister for Land and Water Conservation issued *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* pursuant to Section 306 (3) of the *Water Management Act 2000*. These Guidelines set out the methodology and requirements for calculating and levying commercial developer charges including the process of agglomerating capital charges to minimise the number of Development Servicing Plans (DSPs).

The Minister for Energy and Utilities has now approved insertion of the following at the end of Section 3.3.2 on page 19 of the guidelines. The modification provides Local Water Utilities (LWUs) with more flexibility in selection of the number of DSP areas and developer charges to be adopted.

Additional Agglomeration

LWUs may carry out additional agglomeration of DSP areas if this is warranted to suit their local circumstances. The process will be as follows:

1. Subject to note 4 below, any DSP area can be agglomerated with the next highest or the next lowest DSP area on the basis of the weighted average developer charge for their areas.
2. Alternatively, the LWU may agglomerate all its DSP areas to calculate a weighted average developer charge for all new development.
3. The developer charges resulting from the additional agglomeration will be the maximum charges which the LWU can levy in each of the new agglomerated DSP areas.
4. However, in order to provide appropriate signals regarding the cost of urban development, additional agglomeration is not recommended for new development areas with high calculated developer charges (over about \$20,000 per ET), where these areas involve a significant proportion of the LWU's new development.

The process is demonstrated in the attached example.

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Director-General

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Example – Additional Agglomeration of Developer Charges

An LWU calculates capital charges agglomerated into 3 DSP Areas in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*, December 2002.

DSP Area	Capital Charge	Share of Growth	Reduction Amount	Developer Charge	Option 1 Developer Charge (agglomerate A and B)	Option 2 Developer Charge (agglomerate B and C)	Option 3 Developer Charge (agglomerate A, B and C)
(1)	(2)	(3)	(4)	(5) = (2) - (4)	(6)	(7)	(8)
A	\$11,500	55%	\$1,100	\$10,400	\$9,470	\$10,400	\$7,800
B	\$8,000	20%	\$1,100	\$6,900		\$4,610	
C	\$3,860	25%	\$1,100	\$2,760	\$2,760		

In addition to developer charge column(5) above for the 3 DSP areas calculated in accordance with the Guidelines, Circular LWU 5 provides LWUs with the flexibility of carrying out additional agglomeration to suit their local circumstances.

For this example, the LWU could elect to:

1. Adopt the calculated developer charges, shown in column (5) above.
2. Agglomerate DSP Areas A and B into one area, resulting in the developer charges in column (6) above.
3. Agglomerate DSP Areas B and C into one area, resulting in the developer charges in column (7) above.
4. Agglomerate all 3 DSP areas, resulting in the developer charge in column (8) above.