



Independent Pricing and Regulatory Tribunal

Review of developer charges for metropolitan water agencies

Sydney Water Corporation
Hunter Water Corporation
Gosford City Council
Wyong Shire Council

Water — Issues Paper
November 2007



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Invitation for submissions

The Independent Pricing and Regulatory Tribunal (IPART) invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions from Sydney Water Corporation, Hunter Water Corporation, Wyong Shire Council and Gosford City Council are due at noon on **Friday 21 December 2007**.

All other stakeholders are encouraged to comment on this paper and the agency submissions. Stakeholder submissions are due on **Friday 1 February 2008**.

We would prefer to receive them by email at <ipart@ipart.nsw.gov.au>.

You can also send comments by fax to (02) 9290 2061, or by mail to:

Review of developer charges for metropolitan water agencies
Independent Pricing and Regulatory Tribunal
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Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au>. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission – for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be subject to appeal under freedom of information legislation.

If you would like further information on making a submission, IPART's submission policy is available on our website.

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Contents

Invitation for submissions	iii
1 Introduction	1
1.1 Objectives of the review	2
1.2 Context for the review	2
1.3 The review process	5
1.4 Purpose and structure of this paper	6
2 New issues for the determination	9
2.1 Determination for recycled water developer charges	9
2.2 Regulatory oversight	10
2.3 Water Industry Competition Act	12
2.4 Wyong Council's stormwater revenue	12
3 Issues covered by the existing determination	15
3.1 Application of the determination	15
3.2 Information to be included in development servicing plans	15
3.3 Reviews of development servicing plans and charges	18
3.4 Calculation of developer charges using net present value	18
3.5 Assessment of asset costs	18
3.6 Projection of operating costs	21
3.7 Projection of operating revenues	22
3.8 Equivalent Tenements (ETs)	22
3.9 Parameters including discount rates	24
3.10 Demographic assumptions	27
3.11 Impacts of charges	27
3.12 Dispute resolution	27
3.13 Definitions and interpretation	28
Appendices	29
A List of issues for response	31
B Glossary	34
C IPART Act – section 15 requirements	35
D IPART's approach to developer charges	37

1 Introduction

The Independent Pricing and Regulatory Tribunal (IPART) is conducting a review of developer charges levied by Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council. IPART's most recent determination for developer charges was issued in September 2000 and still applies today.¹ The determination can be found on IPART's website: www.ipart.nsw.gov.au.

Developer charges are up-front charges levied by water agencies on land developers to recover some of the costs of providing water-related infrastructure to new developments. They help signal the cost of developing land in a particular area, and also pass on to developers some of the risk associated with infrastructure provision.

IPART made its first determination for developer charges in 1995. The determination adopted a methodology that water agencies must use to calculate their charges rather than IPART setting the charges. Before that, the agencies levied charges based on their own methodologies. IPART assumed responsibility for regulation to improve the efficiency, transparency and consistency of the developer charges process.

Water agencies recover the cost of providing water and related services to newly developed areas through a combination of periodic water and sewerage charges paid by home owners each year and through upfront lump sum charges imposed on the developers of land.

The use of geographically uniform, or postage stamp, pricing for periodic water, sewerage and stormwater services results in prices that do not signal the diversity of costs of providing these services to different locations. Developer charges are a means by which water agencies are able to recover location specific costs that are higher than the amount that can be recovered by periodic charges.

Through a combination of developer charges and periodic charges water agencies are able to recover the full cost of providing water related services to new entrants without placing an additional burden on existing customers.

¹ Independent Pricing and Regulatory Tribunal of New South Wales, Determination No 9, 21 September 2000. *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges - From 1 October 2000.*

1.1 Objectives of the review

The key objectives of the review are to:

- ▼ update the last determination to reflect changes in the water industry since that time
- ▼ resolve a number of definitional and operational questions that have arisen in the practical application of the determination and
- ▼ respond to matters raised in submissions.

The underlying tenet of the methodology is that new developments should pay the full costs of water-related services through a combination of periodic and developer charges. In this way, those who impose additional costs on the system bear that cost.

1.2 Context for the review

In the seven years since IPART's last developer charges determination for the metropolitan water agencies there have been some significant changes in the NSW water industry. These include:

- ▼ The introduction of the Building and Sustainability Index (BASIX), which currently requires reductions in average water use in new houses and multi-unit dwellings built in NSW.
- ▼ A commitment in the Metropolitan Water Plan that new developments in Sydney's growth centres will be connected to recycled water².
- ▼ The introduction of the *Water Industry Competition Act 2006* which provides for greater private sector provision of water-related services.

Some of the metropolitan water agencies conducted a review of their development servicing plans and developer charges in 2006. The development industry has raised a number of issues concerning the new charges and has questioned a number of aspects of the implementation by the agencies of IPART's methodology.

IPART is concurrently conducting a separate review of Sydney Water's periodic water, sewerage, stormwater and recycled water prices to apply from 1 July 2008. In commissioning that review, the Premier required IPART to take account of the desalination project being undertaken by Sydney Water as well as several recycling projects including the Western Sydney Recycled Water Initiative Replacement Flows Project and the Camellia Recycled Water Project. There are interconnections between the setting of periodic prices and the setting of developer charges. Therefore decisions made by IPART in relation to these matters may have important consequences for the level of Sydney Water's developer charges. In August 2007, IPART released an Issues Paper³ as part of its review of Sydney Water's periodic

² NSW Government, *2006 Metropolitan Water Plan*, p 35.

³ IPART, *Review of prices for Sydney Water's water, sewerage, stormwater and recycled water services from 1 July 2008 - Issues Paper*, August 2007.

prices. That Issues Paper invited submissions from interested parties and identified the key issues for comment.

1.2.1 History of developer charges

IPART's developer charges methodology has been developed over many years in consultation with stakeholders including the general public, the development industry, government, and the water agencies. IPART's approach specifies a methodology for calculating developer charges rather than setting specific charges. The principles and objectives of developer charges have remained broadly unchanged since IPART's first developer charges determination in 1995⁴. A number of refinements and clarifications to the methodology were incorporated in a supplementary note in 1997⁵ and again in a revised determination⁶ in 2000.

In 2006, IPART made a determination based on a methodology which agencies must use to calculate recycled water developer charges. Attached to the determination is a set of guidelines agencies must follow to calculate periodic charges for recycled water services⁷. The determination was prompted by the growth in the recycled water market and by the NSW Government's commitment to supply recycled water via dual reticulation to new houses in Sydney's growth centres. The recycled water developer charges methodology is similar to the methodology for water, sewerage and stormwater services. However, it allows an offset when a recycled water scheme results in the avoidance or deferral of costs in the provision of other water services.

1.2.2 IPART's developer charge determination

The developer charges methodology calculates developer charges as the capital cost attributable to the development less the future operating surpluses (or deficits) expected to be earned from periodic charges paid by customers in the development area. The methodology uses a net present value (NPV) approach (a full explanation of IPART's approach to and determination of developer charges can be viewed in Appendix D) which allows costs and revenues to be reconciled to a single value by discounting them to today's dollars.

⁴ Government Pricing Tribunal of NSW, *Prices of developer charges for water, sewerage and drainage services*, December 1995.

⁵ IPART, *Developer Charges for Water, Sewerage and Drainage Services: A supplementary note to the guidelines for the methodology to be used in calculating developer charges*, July 1997.

⁶ IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council: Developer charges from 1 October 2000*, September 2000.

⁷ IPART, *Pricing Arrangements for Recycled Water and Sewer Mining: Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council*, September 2006.

Box 1.1 shows the existing methodology for calculating the developer charges. The methodology calculates the developer charge per lot or ET (equivalent tenement) as:

- ▼ the present value (PV) of the existing and future assets used to service the development area
- ▼ less the PV of the future net operating profits (or losses) expected from providing the services to the development area – also called the reduction amount
- ▼ divided by the PV of the number of equivalent tenements in the development area.

Box 1.1 The developer charges formula

The developer charge (DC) is calculated as:

$$DC = \frac{NPVr(K)}{PV(ET)} - \frac{NPVr(R_i - C_i)}{PV(ET)} \quad \text{for } i = \text{years } 1 \dots n; n \leq 30$$

Where:

K = a capital charge for the net present value of expenditure on existing and future assets serving the area

R_i = revenue expected to be received by servicing customers in the area in each year (i)

C_i = operating, maintenance and administration costs expected to be spent in servicing customers in the area in each year (i)

ET = the number of equivalent tenements in the DSP area or to be developed in the DSP area

r = the specific cost of capital or the specific discount rate for deriving the net present value of future revenues, costs and equivalent tenements

n = the forecast horizon for the assessment of future revenues and costs

The determination requires water agencies to publish a development servicing plan (DSP) for each development area. As well as the calculation of charges, the DSPs must contain specified information to assist developers in deciding where to undertake land development. The required information includes⁸:

- ▼ Land use planning information.
- ▼ The extent of the DSP area.
- ▼ The services required over the development period.
- ▼ Estimates of future capital and operating costs.
- ▼ Standards of service to be provided to customers and design parameters of assets.
- ▼ Estimates of lot and dwelling production including demographic assumptions.

⁸ IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council: Developer charges from 1 October 2000, September 2000, Schedule 3.*

- ▼ Timing of works and expenditures related to anticipated development and demographic assumptions.
- ▼ Asset information including total asset capacity in Equivalent Tenements (if applicable).
- ▼ The calculated developer charge and the basis on which it is calculated.
- ▼ A reference to other relevant DSPs.

The determination requires agencies to review their DSPs once, and only once, every five years or as required by IPART. After review, water agencies must publicly exhibit their draft DSPs for 30 days before adoption of the charges. Developers are able to view and if necessary forward any complaints about the charges to the agency during the 30 day exhibition period. The agency must assess any complaint but if this process does not resolve the complaint then the developer can have the matter arbitrated before an independent arbitrator.

1.3 The review process

In conducting its review IPART will rely on its own research and analysis as well as public consultation. As part of this consultation IPART invites the four water agencies and other interested parties, including members of the public, to make submissions to the review. Details on how to make submissions are provided at the front of this document. IPART will also hold a public hearing as part of the review to provide a further opportunity for stakeholders to present their views.

Following this consultation, IPART will release a draft report, and invite stakeholders to comment on its draft findings. IPART will consider these comments before making its final determination and releasing its final report. An indicative timetable for the review is provided in Table 1.1.

Table 1.1 Indicative review timetable

Task	Timeframe
Receive submissions from water agencies	21 December 2007 (noon)
Receive public submissions	1 February 2008
Public hearing	10 March 2008
Release draft report	23 May 2008
Receive submissions on the draft report	20 June 2008
Release final report	15 August 2008

Note: Dates are indicative and may be subject to change.

In making its determination, IPART will be guided by the IPART Act. Under this Act, IPART is required to consider a broad range of issues including social, environmental and agency-specific concerns. In particular, section 15 of the Act (see Appendix C) requires IPART to consider matters related to:

- ▼ consumer protection – protecting consumers from abuses of monopoly power; standards of quality, reliability and safety of the services concerned; social impact of decisions
- ▼ economic efficiency – greater efficiency in the supply of services; the need to promote competition; effect of functions being carried out by another body
- ▼ financial viability – rate of return on public sector assets including dividend requirements; impact on pricing of borrowing, capital and dividend requirements of agencies, and
- ▼ environmental protection – promotion of ecologically sustainable development via appropriate pricing policies; consideration of demand management and least-cost planning.

1.3.1 Implementing changes from the review

The final determination will set a date for the implementation of changes to Development Servicing Plans (DSPs) and developer charges. The indicative release of the final report is 15 August 2008. IPART is mindful that agencies may be bound by other requirements and therefore requests agencies to nominate their preferred date for adoption of revised DSPs and charges. Agencies should include the reasons for their preference. At this stage IPART envisages that new DSPs and developer charges will be adopted on or after 1 January 2009.

IPART seeks comment on the following:

- 1 What is the preferred date for adoption of revised DSPs and charges? Agencies should provide reasons for their choice of preferred date of adoption.

1.4 Purpose and structure of this paper

The following two chapters present key issues for the review of developer charges. The issues have been identified from a number of sources including:

- ▼ public submissions to agencies during their review of charges in 2006
- ▼ IPART's approval process for calculation spreadsheets prior to adoption by the agencies, and
- ▼ IPART's 2007 review of the *Department of Water and Energy's Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*.

Chapter two focuses on new matters that have arisen since the last determination in 2000.

Chapter three discusses issues that are linked to sections of the current determination.

However, stakeholders are invited to comment on any issues relevant to this review even if not discussed in this paper.

2 New issues for the determination

This chapter discusses issues that have arisen since the 2000 developer charges determination. These include:

- ▼ IPART's release of a determination for recycled water charges.
- ▼ The introduction of the *Water Industry Competition Act 2006*.
- ▼ IPART's 2007 review of the Department of Water and Energy's *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater*.
- ▼ Reviews of development servicing plans by the agencies in 2006.

Respondents are encouraged to comment on the issues described below, and any other matters they consider important to the review of the methodology.

2.1 Determination for recycled water developer charges

In 2006 IPART released a determination for developer charges for recycled water services because Determination No.9, 2000, the subject of this review, does not apply to those services.

However, while the recycled water determination is based on Determination No.9, 2000, it recognises any costs that are avoided in water and sewerage services as a result of the provision of recycled water. It also incorporates a number of refinements to Determination No.9, 2000. The main changes are:

- ▼ Provision for subtracting avoided costs⁹ from the capital charge.
- ▼ Provision for varying the discount rate over time for each agency. The rate for each agency should reflect the real pre-tax rate of return determined in the agency's most recent periodic price determination.
- ▼ Because the determination for recycled water developer charges was enacted before the construction of most recycled water schemes, all assets are discounted from the day they are commissioned (instead of from 1996 as required by Determination No.9, 2000).
- ▼ Periodic charges used in the reduction amount will be those calculated by the agency in accordance with IPART's *Pricing Guidelines for Mandated Recycled Water Schemes*¹⁰.

⁹ Avoided costs are those that the agency will avoid or defer in its water or sewerage operations due to providing recycled water services.

¹⁰ IPART, *Pricing arrangements for recycled water and sewer mining - Sydney Water Corporation, Hunter Water Corporation, Gosford City Council and Wyong Shire Council*, September 2006.

IPART seeks comment on the following:

- 2 Is there benefit in having one developer charge determination covering both recycled water services and water, sewerage and stormwater services?
- 3 Should the changes introduced in the recycled water developer charges determination (eg rate of return) be applied more broadly to developer charges for water, sewerage and stormwater services?

2.2 Regulatory oversight

IPART's approach to developer charges sets a methodology instead of individual prices for each DSP area. Generally speaking IPART is satisfied that its methodology provides the required balance of flexibility and prescription for agencies to produce accurate, consistent, transparent and timely developer charges. IPART believes that the methodology adopted has achieved the principles and objectives enunciated in its previous determinations in 1995 and 2000.

This light handed approach recognises that it would be impractical for IPART to perform the great number of calculations and reviews required to calculate individual charges. Developers need a timely response when applying for an assessment of charges. The hundreds of existing DSPs mean unworkable delays would occur if water agencies had to return to IPART each time they received an application for an assessment of developer charges. By allowing the actual calculations to be completed by the water agencies, delays and regulatory costs are minimised.

In addition to savings in time and cost, a methodology provides greater flexibility for prices to adapt as required. Agencies must calculate charges for different services or components of those services for a number of defined areas that often change and/or expand over time. IPART believes that the agencies are much better placed to respond in a timely manner to the complex asset data and planning information required to calculate developer charges.

The methodology has a process for dispute resolution. Any developer who is dissatisfied with how an agency has calculated its developer charges may have the dispute resolved under Section 31 of the IPART Act. Section 31 requires that the Chief Executive of the agency must review any complaint. Consequently, if the developer is still dissatisfied, then they can request the agency to have the dispute resolved by arbitration.

In addition to setting the methodology for developer charges, IPART has other ongoing regulatory functions:

1. Supplying agencies with the Consumer Price Index multiplier they must use to inflate their charges each year.
2. Approving calculation worksheets when agencies review their charges.
3. Registering DSPs forwarded by an agency once the agency has completed its review of charges and DSPs.

IPART supplies the CPI multiplier to be used by agencies. The existing determination specifies that the water agencies must review their DSPs once and only once in every five year period beginning 1 July 2001 (agencies are also required to review charges as a consequence of IPART making a determination). In between the major five yearly reviews, agencies must annually increase their calculated charges by inflation to keep the charge constant in real terms. In other words, each developer pays the same charge in real terms no matter when the charge was calculated.

Agencies use their own calculation spreadsheets to calculate their developer charges. IPART's role is to approve the calculation spreadsheets when agencies conduct a five year review. When agencies reviewed their charges in 2006, IPART checked their spreadsheets and found that, while different, each spreadsheet individually satisfied the requirements of the methodology. IPART is aware of concerns that if agencies are using different spreadsheets then there is a greater risk that the calculation of charges may also differ. A suggestion has been made for an expansion of IPART's role in regulating charges.

On completion of a five year review agencies must forward their DSPs to IPART for registration. They must also include documentation of any complaints together with the agency's response to the complaints. IPART does not check the calculation of the individual developer charges or the asset data that agencies use in their calculations. IPART believes that during the 30 day public exhibition period for DSPs, developers are much better placed to assess the validity of asset information included in agencies' DSP calculations. To assist in this process IPART has sought through its determinations to ensure that agencies meet high standards of transparency in calculating their charges so that developers are able to make informed decisions regarding land development. Arbitration is available to resolve any disputes.

IPART seeks comment on the following:

- 4 Are there advantages or disadvantages if IPART was to provide additional regulatory oversight either before or after adoption of the DSPs and charges?
- 5 Are there advantages or disadvantages for IPART to develop, in conjunction with the water agencies and peak development bodies, a standard calculation spreadsheet?

2.3 Water Industry Competition Act

The NSW *Water Industry Competition Act 2006* (WICA) was introduced into the NSW parliament in October 2006 and was passed in November 2006. The objective of the Act is to encourage competition in the supply of water and sewerage services including recycled water.

Under WICA the Minister may declare a specified licensed retail supplier or licensed network operator to be a monopoly supplier. Subsequently the Minister may refer the determination of pricing and/or a periodic review of pricing policies of the monopoly supplier to IPART for investigation and report. Therefore the methodology adopted for calculating developer charges for public water utilities may in future have wider application to monopoly private sector suppliers.

Any new monopoly supplier of water and related services will need to be able to recover the costs they incur in providing services through a combination of developer charges and periodic charges.

IPART understands that the developer charges methodology needs to be applied in a balanced way to both incumbent water agencies and any new monopoly suppliers.

IPART seeks comment on the following:

- 6 What issues may arise in the application of developer charges in light of the *Water Industry Competition Act 2006*?

2.4 Wyong Council's stormwater revenue

Wyong Shire Council is concerned that its developer charges are unfairly reduced because the Council does not have a separate periodic charge for stormwater (drainage) services.

The Water Management Act stipulates that a council can levy a stormwater charge if it has an area designated as a 'drainage area' by the Minister. Because Wyong Shire does not have a designated stormwater drainage area, IPART is unable to determine a periodic stormwater charge for Council. Instead, IPART adds stormwater capital expenditure to Council's Regulatory Asset Base resulting in Council's periodic water and sewerage charges recovering the stormwater costs. However, this results in a higher reduction amount that decreases the levels of water and wastewater developer charges.

Wyong Council initially proposed that IPART determine a stormwater charge for the 2006 periodic charges determination. Council calculated that an amount of \$126.60 (\$2005/06)¹¹ should be deducted from the periodic water and sewerage component of bills and a stormwater charge of \$126.60 should be added to those bills. This was the amount Council had calculated as attributable to its stormwater services. However Council subsequently received advice that it could not levy stormwater charges so IPART did not scrutinise the amount. IPART expects that Council can resolve the issue arising from the Water Management Act to enable the determination of a periodic stormwater charge for the next periodic pricing determination.

IPART seeks comment on the following:

- 7 Is an adjustment required to Wyong Shire Council's water and sewerage developer charges to exclude a stormwater revenue component pending Wyong Council satisfying requirements for the imposition of a separate stormwater charge?

¹¹ Wyong Shire Council, *Proposed Price Path from July 1 2006 (submission)*, p 9.

3 Issues covered by the existing determination

This chapter presents issues which have arisen in the application of the current determination. In general terms, the chapter lists the issues in the same sequence as they appear in the current determination.

3.1 Application of the determination

The first section of the determination:

- ▼ Explains the basis of IPART's legislative powers in applying the determination.
- ▼ Provides information about the date when the determination takes effect. The date is subject to Schedule 2 of the determination which has some specific start date rules for each agency.
- ▼ Informs readers of the determination's use of a methodology employing net present value principles and refers them to Schedule 1 for a detailed explanation.

IPART is not aware of any specific issues arising from this section of the determination but welcomes any comments from stakeholders.

3.2 Information to be included in development servicing plans

This section of the determination addresses the requirement that certain information, including calculations of developer charges, must be provided in development servicing plans. It refers readers to various Schedules of the determination which provide the detail of the information requirements. Provision of this information promotes transparency in the developer charges process which promotes compliance with the determination.

The information includes requirements for public exhibition of DSPs before they are adopted. This gives developers the opportunity to analyse a DSP and if necessary forward complaints to the agency about any aspect they believe does not comply with IPART's determination.

The 2000 determination introduced many changes to further improve the transparency of DSPs. Agencies must:

- ▼ exhibit the plans for at least 30 working days
- ▼ follow a specified format for the plans
- ▼ show the developer charge and the basis on which it was calculated
- ▼ explain the basis on which DSP boundaries were established
- ▼ express charges on a per equivalent tenement basis
- ▼ compare the new developer charge with the existing charge.

Nonetheless, IPART has been made aware of several issues concerned with transparency of information. These issues are raised below for further comment.

3.2.1 DSP boundaries

Schedule 3 of the determination mandates that agencies must, among other requirements, provide information in DSPs that shows the extent of the DSP area including:

- ▼ its size
- ▼ the basis for defining its boundaries, and
- ▼ reference to other DSPs where there is overlap or co-usage of Assets.

Generally speaking the determination allows DSP areas to be determined by individual agencies because they have the required information and expertise to make coherent choices about the aggregation of assets into a DSP area. IPART is not aware of any particular issues concerned with the choice of DSP areas but welcomes any comments on this topic. For example, have particular agencies chosen boundaries resulting in too many DSP areas? Would aggregation of the areas into a smaller number of larger areas result in more appropriate charges? Conversely would disaggregation of specific DSP areas into a larger number of smaller areas improve the cost reflectivity of charges?

IPART seeks comment on the following:

- 8 Whether particular DSP boundaries result in distortion of the associated developer charge?
- 9 What principles for determining where DSP boundaries should be established?

3.2.2 Transparency of system capacity

The Association of Consulting Surveyors of Australia has noted that agencies are not required to show the capacity of their assets. This makes it difficult to assess the developer charge calculation. Developers should only pay for the capacity they use in the network and have concerns that they are unable to determine if they are being charged for more than that capacity.

The determination¹² requires agencies to make available background documentation containing the description of assets. However the agency has the discretion not to supply some of the asset information (i.e. efficient cost, unit cost, MEERA valuation, total asset capacity in ETs) in the background document if it judges that the information is 'not applicable'.

IPART seeks comment on the following:

10 What information do developers need on asset capacity to assess the calculation of charges?

3.2.3 Transparency of MEERA values

The developer charges methodology requires agencies to calculate asset values at efficient market costs for future assets and at Modern Engineering Equivalent Replacement Asset Values (MEERA) for those already commissioned. MEERA is defined as the value of the asset (or assets) calculated 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.

Stakeholders have expressed concern about the agencies' MEERA valuations. They are concerned that agencies are not using consistent MEERA values and that the values may not be current. Developers claim that the lack of background information regarding particular MEERA values hampers analysis. The UDIA has suggested that developers need greater access to each agency's 'modern MEERA' cost rates¹³.

IPART seeks comment on the following:

11 What information on asset values is needed by stakeholders to improve the transparency of the process?

12 What is the most appropriate method that agencies can use to supply this information?

¹² IPART, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council: Developer charges from 1 October 2000*, September 2000, Schedule 3, section A.7.

¹³ UDIA, *A Review of SWC's Draft 2006 Developer Charges (submission)*, October 2006, p 6.

3.3 Reviews of development servicing plans and charges

The third section of the determination explains the process for reviewing DSPs and the associated charges. IPART is not aware of any specific issues arising from this section of the determination but welcomes any comments from stakeholders.

3.4 Calculation of developer charges using net present value

The fourth section of the determination addresses the formula and inputs to the formula to be used in calculating charges. Readers are directed to Schedule 4 of the determination which requires agencies to calculate their developer charges using a formula based on net present value principles and inputs defined in the Schedule. Issues involving components of the formula follow.

3.5 Assessment of asset costs

Section 5 of the determination provides information that agencies must follow when assessing the costs of their assets as part of the NPV calculation. The section provides information for tasks such as asset identification, asset valuation, asset apportionment, and the correct treatment of assets when calculating the Capital Charge component of developer charges. Issues relating to this section follow.

3.5.1 General issues including the identification of assets

The basic approach of IPART's methodology is that each development should pay for the capacity of the existing and future assets that it uses or will use. All assets or parts of assets that service the development area must be included in the calculation of a developer charge except:

- ▼ that part of an asset provided for a reason other than to service growth
- ▼ that part of an asset that services other DSP areas
- ▼ the capacity of an asset that was made available by changes in land use patterns, or by changes in average demand
- ▼ any asset that was unreasonably oversized relative to system and capacity requirements, based on available demographic data at the time it was commissioned
- ▼ any asset commissioned prior to 1 January 1970
- ▼ assets funded by developers and transferred free of charge to the agency
- ▼ assets or parts of assets without a nexus to the development that they are intended to serve
- ▼ in the instance of recycled water developer charges, the portion of any asset legitimately recovered from customers other than recycled water customers¹⁴.

¹⁴ This point relates to IPART's determination of developer charges for recycled water schemes. These costs may include avoided or deferred costs resulting from recycled water (or other water sources) or due to a government directive for costs to be recovered from the broader customer base.

IPART seeks comment on the following:

13 Whether developers and other users of asset information are satisfied with the asset information currently being provided by water agencies?

3.5.2 Apportionment of assets

Assets or parts of assets must be apportioned so that only the costs attributable to a particular development area are recovered. The development industry is concerned that, as a result of the failure to apportion or of because of incorrect apportionment, water agencies are recovering costs for assets that are not attributable to their particular development area. Apportionment is needed where:

- ▼ an asset is built for a dual purpose, for example to meet higher environmental standards and to service growth areas
- ▼ an asset is replaced and the new asset services both existing and new development
- ▼ an asset services more than one DSP area.

Developers report that the capital charge has increased significantly in several DSP areas and are concerned that part of the reason for the increases may be attributable to incorrect apportioning of assets. They would like to see greater transparency regarding apportionment in DSPs so they can investigate how assets have been apportioned.

IPART seeks comment on the following:

14 What asset information is considered necessary but not currently provided by agencies to ensure that assets are apportioned correctly?

3.5.3 Assets transferred free of charge

Paragraph 5.4 (a) of the existing determination specifies that any assets funded by a developer and transferred free of charge to the agency must be excluded from the calculation of the developer charge.

General practice is for developers to construct the 'reticulation assets' servicing their own development. The assets are then donated or 'gifted' to the water agency at no cost. IPART has been informed that in some cases larger assets such as mains and treatment plants are also built by developers and transferred to the agency. These assets may service developments other than the developer's own development. There are also instances where the water agency funds the reticulation assets or where the agency reimburses developers for some or all of the costs of assets.

IPART needs to understand the details of all arrangements between water agencies and developers in instances such as these. This information will help ensure the correct treatment of assets in the developer charges calculation. The information is also important because there is an interaction in IPART's processes for calculating developer charges and periodic charges.

IPART seeks comment on the following:

- 15 Are there arrangements in place for funding developments that fall outside IPART's current developer charge determination?

3.5.4 Valuation of assets

The current determination requires existing assets to be valued on a MEERA basis and future assets to be valued on an estimated efficient costs basis¹⁵.

If existing assets are revalued periodically to their MEERA values for the purpose of calculating developer charges then the return to agencies may be different to the return from the value of their original investment inflated to current day's dollars. It has also been suggested that periodic revaluations of assets to reflect contemporary MEERA values can significantly increase charges. Therefore a general issue is whether MEERA is the most appropriate means of valuing assets for the purpose of calculating developer charges.

IPART seeks comment on the following:

- 16 What are the advantages and disadvantages of using MEERA as the method to value assets?

3.5.5 Identifying the growth component of water supply headworks

IPART's determination for developer charges mandates that agencies use a high level methodology to calculate their developer charges. Consequently there are many decisions that are left to the water agencies to make before the specific inputs to the methodology are established. When the decision to construct a new asset or augment an existing asset is taken, there may be more than one objective driving the decision. For example, new environmental standards may create a need to upgrade an asset but while doing so the agency may decide to additionally upgrade the asset to provide new capacity for expected growth. Only the costs associated with the expected growth should be included in the developer charges calculation [see Determination, Section 5.4(a) – Calculation of capital charge].

In the near future this particular decision process will have significant ramifications. It may be applied to the construction of several large infrastructure projects proposed by water utilities including the desalination plant in the Sydney Water area, the

¹⁵ By definition, efficient cost for new assets is their MEERA value.

Tillegra Dam in the Hunter Water area and major supply assets in the Gosford and Wyong Councils' areas. In the current environment of drought and expected impacts from global warming, these expenditures could be seen to be driven by the need to provide security of supply for existing customers. Alternatively, these expenditures could also be seen as a way of providing more capacity to cater for population and commercial growth. In this latter scenario the costs, or part of the costs, of these projects should be included in the calculation of developer charges.

What drives the construction of these projects will determine whether their costs are recovered from developer charges or periodic charges, or more precisely, from existing customers or from new customers. Water agencies will provide their views on this issue when they make their pricing submissions to IPART at the time of their next pricing determination. In turn IPART wishes to apply a consistent and appropriate method to allocate the costs when determining prices.

IPART seeks comment on the following:

- 17 What methods or guidelines should be adopted to achieve an appropriate and consistent way of determining the drivers of proposed water supply headworks expenditure?

3.6 Projection of operating costs

An important component of the calculation of developer charges is the deduction of the net operating profits (or losses) from the total capital cost. This prevents 'double dipping' where customers pay more than they should for the assets they use.

The operating profit/loss (or operating surplus/deficit) is derived by deducting annual operating costs from annual revenues¹⁶. Because annual or periodic charges are calculated on a postage stamp basis, the same revenue figure is applied to all DSP areas. However, the determination encourages calculations of operating costs on a DSP cost reflective basis. Section 6.2 states:

System-wide averages must not be used if the costs of providing Services to the DSP Area vary significantly from the system-wide operating, maintenance and administration costs.

Therefore developer charges can be calculated using average revenues but with DSP specific operating costs. There are some issues stemming from this choice.

The development industry has noted that operating costs for developer charges have increased significantly in some DSP areas since the 2000 review¹⁷. In some cases costs are higher than revenues leading to a net operating deficit. This increases the developer charge for that DSP. Some groups argue that this effectively shifts higher operating and maintenance costs (which generally should be recovered from existing customers) onto developers. The development industry also reports that some water

¹⁶ IPART, Determination No 9, *Sydney Water Corporation, Hunter Water Corporation, Gosford City Council, Wyong Shire Council Developer Charges From 1 October 2000*, Schedule 4, 21 September 2000.

¹⁷ UDIA, *A Review of SWC's Draft 2006 Developer Charges (submission)*, October 2006, p 5.

agencies have contended that maintenance costs in new development areas are sometimes greater than existing areas. This could be seen as a perverse outcome given that assets are usually older in existing areas and should require more maintenance than new assets in fringe areas.

One effect of shifting maintenance costs into up-front charges is the concern that funds are not put aside for maintenance when it eventually occurs in the future. Such a situation inflates immediate profits and leaves the agency with insufficient funds for future maintenance. At that time further increases to periodic usage charges would be required.

However, one of the objectives of the methodology is for developer charges to be cost reflective and therefore ensure that each new development area only pays for its own costs. If the costs of developing in different locations are to be signalled to developers, differences in both capital and operating costs should be reflected in the developer charge.

IPART seeks comment on the following:

- 18 Why have operation and maintenance costs increased significantly in some DSP areas?
- 19 Are there alternative mechanisms for signalling differences in capital and operating costs between different development areas?

3.7 Projection of operating revenues

The seventh section of the determination explains the process for projection of operating revenues. IPART is not aware of any specific issues arising from this section of the determination but welcomes any comments from stakeholders.

3.8 Equivalent Tenements (ETs)

An equivalent tenement is defined in the determination as the demand on infrastructure of a single residential dwelling. The following sections discuss various issues raised about the treatment of ETs in the calculations.

3.8.1 Peak versus average ETs

The use of different ET measures can affect the level of the developer charge. Because developer charges are levied on a per ET basis, the definition of ETs determines how costs are apportioned to different users. The definition of an ET in the determination is:

...the demand a development will place on the infrastructure in terms of the water consumption and discharge for an average residential dwelling.

Schedule 5 of the determination lists the annual demand for a single residential dwelling for each agency. This value is an input to the calculation of annual revenue in the reduction amount.

However assets are built according to a variety of demand requirements (such as instantaneous, peak day, average day and peak dry weather flow). While agencies generally use the annual demand value to calculate the reduction amount, there are differences in the form of ET values used by agencies for the capital charge calculation. Some agencies use values based on peak demand while others use the annual demand.

The current determination has not considered how to apportion the capital charge in relation to peaking factors. IPART seeks comment on the most appropriate basis for apportioning the capital charge.

IPART seeks comment on the following:

- 20 How and why do agencies use ET peaking factors to calculate, and ultimately to allocate, the capital charge and reduction amount?
- 21 Is a new definition of ETs and/or re-expression of the developer charges formula required to incorporate use of peaking factors?

3.8.2 Which ETs to include

The determination does not provide the same degree of prescription for determining the treatment of ETs in the calculations as it does for other components. The determination has various rules to establish which assets or parts of assets should be included in the calculation of developer charges. For example, assets before 1970 must be excluded. There are rules to follow when calculating the reduction amount. For example the methodology calls for the inclusion of future revenues and operating costs for the next 30 years. For ETs, the methodology requires calculations be based on the PV of the number of ETs in the development area, or to be developed in the DSP area.

IPART is interested in receiving comments about the current treatment of ETs in DSPs and if there are ways to improve this aspect of the methodology.

IPART seeks comment on the following:

- 22 What problems exist with the current treatment of ETs in DSPs?
- 23 What improvements could be made to the methodology regarding the treatment of ETs?

3.8.3 ET multipliers

The determination does not address the calculation of ET multipliers, each agency makes its own decision on the level of its multipliers. ET multipliers are used to measure the usage characteristics of different types of development, from high density units to heavy industrial. A single ET reflects the demand of a single residential dwelling. In turn, individual development types are assigned a multiple of ETs to reflect their demand on infrastructure.

In their 2006 review of charges, agencies received some complaints concerning their calculation of multipliers and the lack of transparency in DSPs. Because the calculation of multipliers can have a significant impact on the level of charges, the calculation of multipliers should be transparent and should properly represent the capacity used in the water systems.

IPART seeks comment on the following:

- 24 How should agencies determine the ET multipliers for varying development types?

3.9 Parameters including discount rates

The determination sets a number of important parameters for the calculation of developer charges including discount rates and annual water consumption levels per ET. There is also a mandatory discount from the maximum allowable charge that applies to Wyong Council. These parameters are fixed as absolute values in the determination and this has been raised as a concern by both water agencies and developers. IPART intends to review all of the parameters in the determination and if appropriate update them from their 2000 levels.

3.9.1 Discount rates

The current discount rates for pre-1996 assets are 3 per cent for Sydney Water and Hunter Water and 0 per cent for Gosford and Wyong Councils. These levels reflect IPART's view that agencies did not expect a full commercial return from developer charges prior to the introduction of IPART's methodology in 1996.

The discount rate for post-1996 assets for all agencies is 7 per cent. This reflected a commercial return in 2000. In the recent recycled water developer charges determination IPART determined that the discount rate for post-2006 assets should

be the weighted average cost of capital of the agency as determined from time to time by IPART in its reviews of the agency's periodic prices.

Some stakeholders have also suggested that the 1996 threshold should roll forward over time. For example, Sydney Water's existing assets commissioned after 1996 could revert to a 3 per cent discount rate after 10 years operation.

IPART seeks comment on the following:

25 What are appropriate discount rates for pre-1996 and post-1996 assets?

26 Should the 1996 threshold roll forward over time?

3.9.2 Consumption per ET and BASIX

Schedule 5 of the determination fixes the annual consumption for an average residential customer that must be used when calculating the reduction amount. The consumption levels were valid in 2000 but agencies report that actual consumption is now significantly lower. This has resulted from the success of demand management measures initiated by agencies, as well as the introduction of the Building Sustainability Index¹⁸ (BASIX) requirements by the NSW Government. The impact on developer charges of using the determination's values is that the reduction amount is larger, and hence the developer charge smaller, than they would be if the current demand figures are used. IPART will therefore consider how the consumption parameters could be more appropriately determined.

The BASIX legislation aims to reduce average potable water use by 40 per cent in new or renovated houses. Estimates are that a pre-BASIX home used on average 240 kilolitres of potable water per year, while a BASIX home uses around 150 kilolitres per year¹⁹. The determination consumption requirement was developed before the introduction of BASIX.

The implementation of BASIX and recycling initiatives will generate considerable potable water savings. The Metropolitan Water Plan estimates that 145 billion litres of potable water can be saved each year through demand reduction programs²⁰. These savings can benefit the entire network potentially allowing existing installed capacity in the system to accommodate greater numbers of new customers. They could also free up capacity previously allocated (in dams and pipes) to allow new water and sewerage systems to be designed for lower water demands.

Developers are concerned that developer charges potentially could increase for a BASIX household even though BASIX requirements have led to higher expenditure and reduced demand on system capacity. Agencies believe that reduced revenue as a consequence of a decrease in consumption has more than offset any allowance for the reduced capacity used by the development. Developers are also concerned by

¹⁸ www.basix.nsw.gov.au

¹⁹ Assuming a 40 per cent reduction in potable water use.

²⁰ NSW Government, *Metropolitan Water Plan (2006)*, p 15.

the counter-intuitive outcome of higher developer charges when water savings have been achieved through costly BASIX standards implementation. IPART will review this aspect of the developer charges methodology.

IPART seeks comment on the following:

- 27 For each agency, what is the current consumption (in kilolitres) for both pre- and post BASIX average residential dwellings? In addition, on what basis should the consumption parameter be calculated when DSPs are reviewed? (For example, should the consumption parameter be set using recent data or using an average over a longer period?)
- 28 Should there be two consumption parameters: one for pre-BASIX ETs and one for post-BASIX ETs, or a post-BASIX only?
- 29 Has reduced consumption in post-BASIX developments been reflected in the allocation of assets in water systems and therefore reflected by reduced capital charges?
- 30 Are there any additional impacts from BASIX or recycling initiatives on developer charges for water supply (including recycled water), sewerage and stormwater?

3.9.3 Wyong Council's 15 per cent discount

Paragraph 4(f) in schedule 5 of the determination caps Wyong Shire Council's charges at 85 per cent of the calculated charge. IPART imposed the cap because it was concerned about the possible impacts of potentially higher developer charges in the Wyong area. The Council has asked IPART to reassess this discount as part of this review.

Removal of the discount could mean an immediate 15 per cent increase in Wyong Council's developer charges. IPART is mindful of the impacts of such large increases in charges and therefore seeks input from both Wyong Council and other stakeholders.

IPART seeks comment on the following:

- 31 What are the impacts that the 85 per cent cap on developer charges has on Wyong Council's business?
- 32 What are the possible impacts of removing the 85 per cent cap on Wyong Council's charges?

3.10 Demographic assumptions

In estimating the number of future ETs, the determination specifies that agencies must have regard to the latest demographics data published by the NSW Department of Urban Affairs and Planning (now the Department of Planning). While IPART is not aware of any concerns regarding the demographic statistics, queries have been made about the relationship between population estimates and ET forecasts. They ask whether the estimates are an adequate representation of the infrastructure requirements of some areas and consequently of the number of ETs used in calculations. For example, in some areas the occupancy rate of dwellings is reducing over time. Therefore it would be expected that the growth rate for dwellings would be greater than the population growth rate, or alternatively that a greater number of houses will need to be built to accommodate the same number of people. Developers have argued that in some cases the parameters used by agencies do not reflect the observed and projected trends²¹. Requests for more transparency in this aspect of ET calculations to enable better assessment of agency calculations have been made.

IPART seeks comment on the following:

33 What methods are used by agencies to estimate existing and growth ETs from demographic data?

3.11 Impacts of charges

The eleventh section of the determination requires agencies to publish in their DSPs the previous developer charges for that area. IPART is not aware of any specific issues regarding this section but welcomes any comments from stakeholders.

3.12 Dispute resolution

The twelfth section of the determination explains the process for dispute resolution. The methodology states that any developer who is dissatisfied with how an agency has calculated its developer charges may have the dispute resolved under section 31 of the IPART Act. Section 31 requires initially that the Chief Executive of the agency must review any complaints and consequently, if the developer is still dissatisfied, that they can then request the agency to have the dispute resolved by arbitration.

IPART welcomes any comments from stakeholders regarding the dispute resolution process that applies to the four metropolitan agencies.

IPART seeks comment on the following:

34 Is the dispute resolution process working satisfactorily, and if not, what changes are required?

²¹ UDIA, *A Review of SWC's Draft 2006 Developer Charges (submission)*, October 2006, p 6.

3.13 Definitions and interpretation

The thirteenth section of the determination outlines definitions of important terms used within the determination. IPART is not aware of any specific issues related to this section of the determination that are not discussed elsewhere in this report, however it welcomes any comments from stakeholders.



Appendices

A List of issues for response

- 1 What is the preferred date for adoption of revised DSPs and charges? Agencies should provide reasons for their choice of preferred date of adoption. 6
- 2 Is there benefit in having one developer charge determination covering both recycled water services and water, sewerage and stormwater services? 10
- 3 Should the changes introduced in the recycled water developer charges determination (eg rate of return) be applied more broadly to developer charges for water, sewerage and stormwater services? 10
- 4 Are there advantages or disadvantages if IPART was to provide additional regulatory oversight either before or after adoption of the DSPs and charges? 11
- 5 Are there advantages or disadvantages for IPART to develop, in conjunction with the water agencies and peak development bodies, a standard calculation spreadsheet? 11
- 6 What issues may arise in the application of developer charges in light of the *Water Industry Competition Act 2006*? 12
- 7 Is an adjustment required to Wyong Shire Council's water and sewerage developer charges to exclude a stormwater revenue component pending Wyong Council satisfying requirements for the imposition of a separate stormwater charge? 13
- 8 Whether particular DSP boundaries result in distortion of the associated developer charge? 16
- 9 What principles for determining where DSP boundaries should be established? 16
- 10 What information do developers need on asset capacity to assess the calculation of charges? 17
- 11 What information on asset values is needed by stakeholders to improve the transparency of the process? 17
- 12 What is the most appropriate method that agencies can use to supply this information? 17
- 13 Whether developers and other users of asset information are satisfied with the asset information currently being provided by water agencies? 19
- 14 What asset information is considered necessary but not currently provided by agencies to ensure that assets are apportioned correctly? 19

15	Are there arrangements in place for funding developments that fall outside IPART's current developer charge determination?	20
16	What are the advantages and disadvantages of using MEERA as the method to value assets?	20
17	What methods or guidelines should be adopted to achieve an appropriate and consistent way of determining the drivers of proposed water supply headworks expenditure?	21
18	Why have operation and maintenance costs increased significantly in some DSP areas?	22
19	Are there alternative mechanisms for signalling differences between different development areas?	22
20	How and why do agencies use ET peaking factors to calculate, and ultimately to allocate, the capital charge and reduction amount?	23
21	Is a new definition of ETs and/or re-expression of the developer charges formula required to incorporate use of peaking factors?	23
22	What problems exist with the current treatment of ETs in DSPs?	24
23	What improvements could be made to the methodology regarding the treatment of ETs?	24
24	How should agencies determine the ET multipliers for varying development types?	24
25	What are appropriate discount rates for pre-1996 and post-1996 assets?	25
26	Should the 1996 threshold roll forward over time?	25
27	For each agency, what is the current consumption (in kilolitres) for both pre- and post BASIX average residential dwellings? In addition, on what basis should the consumption parameter be calculated when DSPs are reviewed? (For example, should the consumption parameter be set using recent data or using an average over a longer period?)	26
28	Should there be two consumption parameters: one for pre-BASIX ETs and one for post- BASIX ETs, or a post-BASIX only?	26
29	Has reduced consumption in post-BASIX developments been reflected in the allocation of assets in water systems and therefore reflected by reduced capital charges?	26
30	Are there any additional impacts from BASIX or recycling initiatives on developer charges for water supply (including recycled water), sewerage and stormwater?	26
31	What are the impacts that the 85 per cent cap on developer charges has on Wyong Council's business?	26

- 32 What are the possible impacts of removing the 85 per cent cap on Wyong Council's charges? 26
- 33 What methods are used by agencies to estimate existing and growth ETs from demographic data? 27
- 34 Is the dispute resolution process working satisfactorily, and if not, what changes are required? 27

B | Glossary

BASIX	Building and Sustainability Index
DSP	Development Servicing Plan
ET	Equivalent Tenement
IPART	Independent Pricing and Regulatory Tribunal of NSW
NPV	Net present value
RAB	Regulatory Asset Base
Tribunal	Independent Pricing and Regulatory Tribunal of NSW
WICA	Water Industry Competition Act 2006

C | IPART Act – section 15 requirements

- (1) In making determinations IPART is required by the IPART Act (1992) to have regard to the following matters (in addition to any other matters IPART considers relevant):
- a) the cost of providing the services concerned
 - b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services
 - c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales
 - d) the effect on general price inflation over the medium term
 - e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers
 - f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the Protection of the Environment Administration Act 1991) by appropriate pricing policies that take account of all the feasible options available to protect the environment
 - g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets
 - h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body
 - i) the need to promote competition in the supply of the services concerned
 - j) considerations of demand management (including levels of demand) and least cost planning
 - k) the social impact of the determinations and recommendations
 - l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise)

- (2) In any report of a determination or recommendation made by IPART under this Act, IPART must indicate what regard it has had to the matters set out in subsection (1) in reaching that determination or recommendation.

D IPART's approach to developer charges

This chapter outlines the objectives underlying IPART's approach to developer charges, explains the rationale for establishing a methodology rather than setting particular charges, and describes the methodology including its relationship to periodic prices for water-related services.

D.1 Objectives of developer charges in NSW

Developer charges serve several related functions:

- ▼ recovering the costs of providing water-related infrastructure to new developments
- ▼ signalling the costs of developing in a particular area
- ▼ passing some of the risk associated with the cost of infrastructure provision to developers, and
- ▼ achieving other pricing objectives such as economic efficiency, transparency and equity.

The use of geographically uniform, or “postage stamp”²², pricing for periodic water, sewerage and stormwater services results in prices that do not signal the diversity of costs of providing these services in different locations. IPART's approach to developer charges helps to redress this situation by allowing differential charging to different development areas.

IPART's methodology is intended to encourage investment in water and sewerage infrastructure where it is efficient and prudent. Under this approach, developer charges will be lower in areas where there is spare capacity in existing infrastructure (infill developments) compared with greenfield areas where all infrastructure is new.

The combined revenue from developer charges and periodic charges allows water agencies to recover the full costs of providing water-related services. The agencies should be indifferent about whether the revenue is received from periodic or developer charges as both are regulated by IPART. IPART's intention is that agencies are able to recover their costs including a reasonable rate of return on assets.

²² “Postage stamp pricing” refers to the setting of a common price for a service in a geographic area, irrespective of variations in the cost of supplying the service in different parts of that area (just as there is one price for posting a standard letter within Australia, whether it has to be delivered to the next suburb or to another State).

D.2 Why a methodology?

Under the *Independent Pricing and Regulatory Tribunal Act 1992* IPART may set maximum prices or may determine a methodology for setting maximum prices. IPART has established a methodology for developer charges rather than specifying individual prices because:

- ▼ A consistent and transparent approach to setting developer charges was needed to ensure efficiency and certainty for developer.
- ▼ To determine prices for each development area would require considerable time and resources for both the water agencies and IPART. This could delay development and impose significant regulatory costs.
- ▼ It enables agencies to establish new Development Servicing Plans as they are required.
- ▼ It provides for oversight by IPART and the development industry to ensure the methodology is applied properly.

D.3 What is the relationship between developer charges and other tariffs?

One of the key principles underpinning IPART's current water pricing framework is that prices should fully recover the costs of providing water-related services from the users of those services. This includes full cost recovery from new customers regardless of whether they are located in new development areas or in redevelopments in existing areas.

The total cost of providing new development with water related services is recovered through a combination of periodic charges and developer charges. For the same level of cost recovery, higher periodic charges will result in a lower developer charge and vice versa.

IPART sets periodic charges based on the 'building block' approach. This involves determining a water agency's overall revenue requirement which consists of efficient operating costs and a return on and of efficient capital costs. The revenue requirement is recovered from customers through water-related usage and fixed charges.

The developer charges methodology calculates the value of the assets serving a particular development area and deducts the operating surplus water agencies earn from periodic charges. This avoids 'double dipping'.

Developer charges are linked to periodic charges through the regulatory asset base (RAB) - the value of the agency's assets on which it earns a return. Under IPART's approach to periodic price setting, all capital expenditure (for the existing system and for growth) is added to the RAB. However, the RAB is adjusted downwards over time by the amount of developer charges received from developers. Since periodic

prices depend on the size of the RAB, the collection of developer charges by the water agencies results in a corresponding downward adjustment in periodic prices.

D.4 IPART's developer charges methodology

The basic principles underlying IPART's developer charges methodology are that developer charges should:

- ▼ involve full recovery of relevant costs to service new development
- ▼ reflect variations in the costs of servicing different development areas
- ▼ result in new development areas meeting the costs of the services provided through a combination of developer charges and/or annual charges, and
- ▼ cover only infrastructure expenditures on water, sewerage and stormwater assets that can be clearly linked to the development.

The methodology uses a net present value (NPV) approach to calculate developer charges. This allows costs and revenues to be reconciled to a single value by discounting them to today's dollars.

Box D1 shows the existing methodology for calculating the developer charges. The methodology calculates the developer charge per lot (equivalent tenement) as:

- ▼ the present value (PV) of the existing and future assets used to service the development area
- ▼ less the PV of the future net operating profits (or losses) expected from providing the services to the development area - also called the reduction amount
- ▼ divided by the PV of the number of equivalent tenements in the development area.

Box D.1 developer charges formula

The developer charge (DC) is calculated as:

$$DC = NPVr (K)/ PV (ET) - NPVr (Ri - Ci)/ PV (ET) \quad \text{for } i = \text{years } 1 \dots n; n < = 30$$

Where:

K = a capital charge for the net present value of expenditure on existing and future assets serving the area

Ri = revenue expected to be received by servicing customers in the area in each year (i)

Ci = operating, maintenance and administration costs expected to be spent in servicing customers in the area in each year (i)

ET = the number of equivalent tenements in the DSP area or to be developed in the DSP area

r = the specific cost of capital or the specific discount rate for deriving the net present value of future revenues, costs and equivalent tenements

n = the forecast horizon for the assessment of future revenues and costs

Each component of the formula is described below.

D.4.1 Capital charge

The capital charge is the net present value of the efficient cost of assets (whether existing or future assets) used to service the development area. These costs are initially funded by the water agency. The capital charge can include:

- ▼ Headworks - for example dams, water and sewage treatment plants and ocean outfalls.
- ▼ Works such as pumping stations, water and sewer mains and reservoirs.

The determination excludes a number of assets from the capital charge. For example:

- ▼ any assets provided by developers free of charge to the water agency
- ▼ the capacity of an asset that was made available due to changes in land use
- ▼ assets built prior to 1970
- ▼ parts of assets not directly attributable to growth, such as amendments to environmental legislation
- ▼ parts of assets that are deemed to be unreasonably oversized having regard to the demographic statistics available at the time.

The costs included in the capital charge calculation should be the minimum costs of undertaking the activity. This implies that there should be a clear nexus between the assets included in the calculation and the DSP area. Costs of assets should reflect the least expensive way of providing the quality of service that the community requires.

To calculate the capital charge, water agencies must:

- ▼ identify which assets, existing or future, are part of the system servicing a DSP area
- ▼ apportion assets that service more than one development area, and
- ▼ exclude any assets not allowed by the determination.

The current developer charges determination allows the inclusion of both existing and future assets in the calculation of developer charges. However pre-1970 assets are excluded because their costs are considered to have been fully recovered by the agencies.

D.4.2 Operating surplus

The operating surplus is the net present value of the difference between expected operating revenue and expected operating costs associated with the DSP area. Its inclusion takes into account income received from periodic charges and avoids 'double dipping' (where customers are charged more than they should be for the assets they use).

The current developer charges determination specifies the consumption per residential house that each agency must use when calculating its operating surplus. This was based on average household consumption of single dwelling properties at the time of the last determination. IPART will review these parameters to determine whether the figures for household consumption are still relevant. Section 3.9.2 provides further discussion on the consumption parameter each agency uses.

D.4.3 Equivalent tenements

To calculate the developer charge per lot, both the capital charge and the operating profit must be divided by the present value of the number of equivalent tenements (ETs) in the development area. The current developer charges determination defines an equivalent tenement as:

...a measure of the demand a development will place on the infrastructure in terms of the water consumption and [sewage or drainage] discharge for an average residential dwelling.

This measure allows developments of different types and with different water consumptions to be standardised to a multiple of single dwellings. In this way, each development can be charged for equal units of capacity used in the water system, regardless of the type of development.

The number of ETs is discounted to reflect the time preference of consumption. This is based on the same concept as discounting future cash flows due to the time preference for money, where a dollar available today is worth more than a dollar available in the future. If the ETs are not discounted then the income from developer charges will not equal the expenditure on assets when both are expressed as a present value.

D.4.4 Discount rate

The NPV approach involves discounting a stream of future costs and revenues to today's dollars. The discount rate reflects the opportunity cost to the agency of funding infrastructure works. In addition, because agencies provide infrastructure prior to development, they face several risks such as uncertainty in the rate of development, changes in construction costs and changes in interest rates. IPART has regard to these factors when it sets the discount rate that the agencies must use in their calculations.

The current developer charges determination requires all agencies to use a discount rate of 7 per cent when calculating the net present value of post-1996 assets. This rate was based on the benchmark rate of return used in the corresponding periodic price determinations.

IPART set a lower discount rate for pre-1996 assets of 3 per cent for Sydney Water and Hunter Water and 0 per cent for Gosford and Wyong Councils. These levels reflect IPART's view that agencies did not expect a full commercial return from developer charges prior to their regulatory introduction in 1996.

D.5 Implementing developer charges

Developer charges are calculated for particular development areas in line with the information presented in water agencies' DSPs. The developer charges determination specifies the format of DSPs and the information they must contain. This includes:

- ▼ Land use planning information.
- ▼ The extent of the DSP area.
- ▼ The services required over the development period.
- ▼ Estimates of future capital and operating costs.
- ▼ Standards of service to be provided to customers and design parameters of assets.
- ▼ Estimates of lot and dwelling production including demographic assumptions.
- ▼ Timing of works and expenditures related to anticipated development and demographic assumptions.

- ▼ Asset information including total asset capacity in Equivalent Tenements (if applicable).
- ▼ The calculated developer charge and the basis on which it is calculated.
- ▼ A reference to other relevant DSPs.

Water agencies are required to publicly exhibit their DSPs for at least 30 working days before adoption. They must then submit the DSP to IPART for registration. This is to ensure transparency and provide certainty to developers when they have to make investment decisions regarding where to develop.

The determination requires agencies to review their DSPs once, and only once, every five years or as required by IPART. This allows for any significant changes in service requirements to be reflected in the DSPs and the charges updated accordingly.

