

Dr Peter Boxall AO
Chairman
Independent Pricing and Regulatory Tribunal (IPART)
PO Box K35
Haymarket, NSW, 1240

8 August 2016

Peter,

Dear Dr ~~Boxall~~,

Sydney Desalination Plant (SDP) Preliminary Position Paper to IPART's review of prices from 1 July 2017

IPART's 2011 Determination of prices for SDP's water supply services expires on 30 June 2017 and IPART is required to set maximum prices for SDP's declared monopoly services to apply from 1 July 2017 to 30 June 2022 (the 2017 regulatory period).

The NSW Government's Metropolitan Water Plan foresees SDP playing a key role in securing Sydney's water supply by providing both a long-term water supply service — that assists in meeting population growth and protecting river health — as a well as a short-term water security service to ensure Sydney has sufficient high quality drinking water during drought or water scarcity conditions.

The SDP plant has been in water security mode since June 2012, and while it is expected that our water supply service may not be required for a number of years, our water security role remains a critical element in securing Sydney's water supply. For this reason, we are actively responding to the challenges resulting from the:

- Kurnell tornado that caused significant damage to the SDP plant in December 2015— including restoring and testing the SDP plant to ensure it is able to fulfil its water security role;
- current length of the water security mode and the limited opportunity to test the operating condition of the our assets, with the need to ensure the SDP plant continues to be able to reliably restart and then produce 91.3GL/year of high quality drinking water; and
- uncertainty regarding the future operation of the SDP plant under any revised Metropolitan Water Plan and the impact this has on our operations, asset planning and cost structures.

SDP continues to provide a cost-effective means of delivering water security for Sydney, and our private ownership provides us with financial incentives to continually improve our service performance and cost efficiency and share these improvements with Sydney Water and its residential and business customers.

The regulatory settings in IPART's 2017 Determination will significantly influence the risks and incentives we face over the 2017-22 regulatory period, which in turn will influence our ability to respond to current and future challenges in fulfilling our water security role.

We intend to provide a formal detailed submission to IPART in October 2016 following the release of IPART's Issues Paper. Our detailed October 2016 submission will set out our proposed services, costs and prices for the period 1 July 2017 to 30 June 2022 (our 2017 Plan). It will also include the revenues required to operate and maintain the SDP and the incentive and risk management framework necessary during the 2017-22 regulatory period to ensure SDP can effectively fulfil its water supply and water security services under the Metropolitan Water Plan as well as our obligations to Sydney Water under the Water Supply Agreement.

In our view, while the 2011 Determination was undertaken in challenging circumstances — including a compressed timetable and with little to no observable SDP operating performance — many of the regulatory settings in the 2011 Determination are likely to remain 'fit for purpose' over the 2017-2022 regulatory period. However, other elements of the regulatory settings may require some refinement to ensure they are 'fit for purpose', that is, that they are consistent with the Standing Terms of Reference and address the challenges over the 2017-22 regulatory period in a way that best promotes our customers' long-term interests.

We have prepared this *Preliminary Position Paper* to assist IPART in developing its Issues Paper and to transparently highlight to IPART, stakeholders and the broader community our perspectives on:

- Our role in securing Sydney's water supply under the Metropolitan Water Plan and the uncertainties and challenges in fulfilling this role over the 2017 regulatory period;
- The role of the 2017 Determination in ensuring SDP can effectively fulfil its water supply and water security services under the Metropolitan Water Plan;
- The extent to which the regulatory settings in the 2011 Determination remain 'fit for purpose' over the 2017-22 regulatory period.

We welcome IPART's willingness to engage with us to date and look forward to continued engagement with IPART, Sydney Water, stakeholders and the broader

community to ensure IPART's 2017 Determination facilitates SDP effectively fulfilling its water supply and water security services for the long-term benefit of customers.

If you wish to discuss any aspect of this *Preliminary Position Paper* please contact

[REDACTED]

Yours sincerely

[REDACTED]

Greg Martin
Chairman



SYDNEY
DESALINATION
PLANT



PRELIMINARY POSITION PAPER

IPART's review of SDP prices from 1 July 2017

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1. ABOUT SDP AND OUR ROLE IN MEETING SYDNEY'S WATER NEEDS

Key Points

- The Sydney Desalination Plant (SDP) has a key ongoing role in securing Sydney's water supply and meeting the objectives of the NSW Government's 2010 Metropolitan Water Plan and its NSW 2021 Plan.
- The SDP is capable of providing at least 15% of Sydney's water needs by producing and transporting 91.3GL/year high quality drinking water to Sydney Water's network, which is then provided to homes and businesses across the Sydney region.
- The SDP is NSW's largest privately owned water provider and our shareholders have significant experience in sourcing, financing, executing and managing infrastructure assets around the world.

OUR ROLE IN MEETING SYDNEY'S WATER NEEDS

The SDP plant is a large scale reverse osmosis desalination plant located in Kurnell, Sydney. It is capable of providing at least 15% of Sydney's water needs by treating, filtering and remineralising seawater to produce up to 91.3GL/year of high quality drinking water and transporting this via an 18km pipeline to Sydney Water's network which then distributes the water to homes and businesses across the Sydney region.

SDP forms a key role in securing Sydney's water supply and is an integral part of the NSW Government's 2010 Metropolitan Water Plan¹ and its NSW 2021 Plan².

The SDP plant and pipeline was constructed in response to a severe drought across the Sydney basin, which saw Sydney's dam levels fall to 34% in 2007. The NSW Government's 2010 Metropolitan Water Plan articulates the benefits of diversifying Sydney's water supply in meeting population growth, protecting river health, and responding to future droughts.³ It foresees SDP playing a key role in securing Sydney's water supply by providing both a long-term water supply service as well as a short-term water security service. (See Figure 1).

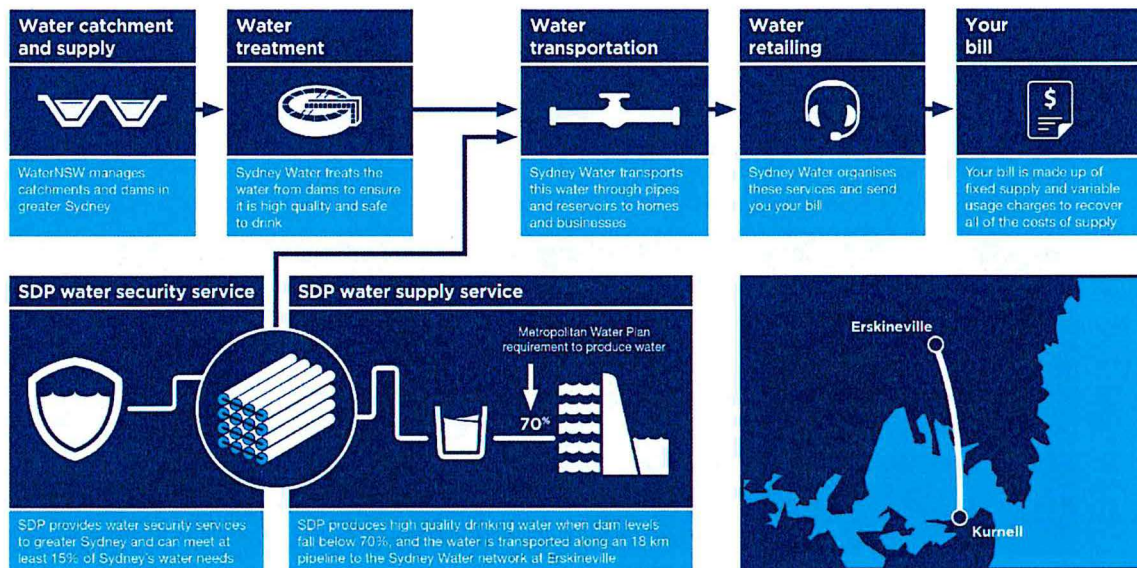
In short, the existence of SDP provides valuable 'insurance' to the community to ensure that in the event of another severe drought (or major Sydney Water supply outage), Sydney does not have to endure the significant economic cost of water use restrictions as occurred during the last decade.

¹ The Metropolitan Water Plan was first developed in 2004 and updated in 2006 and 2010. The 2010 Metropolitan Water Plan is currently being reviewed.

² NSW Government, *NSW 2021: A plan to make NSW number one*, 2014.

³ NSW Government, *The Metropolitan Water Plan*, 2010, p6.

Figure 1: SDP plays a key role in ensuring Sydney always has sufficient water to meet its needs



Source: Sydney Desalination Plant

The operations of SDP are governed by the:

- the Metropolitan Water Plan which prescribes the operating rules⁴ and requires SDP to operate and maintain its infrastructure with the objective of maximising the production of drinking water when Sydney catchment storage levels fall below 70% until storage levels recover to 80%⁵;
- the Water Supply Agreement with Sydney Water Corporation (SWC) which obliges the SDP to provide drinking water when requested⁶; and
- the Water Industry Competition Act 2006 (WIC Act), supporting regulation and SDP's licences⁷, which empowers IPART to regulate the SDP's pricing and to monitor its licensed operations.

⁴ These rules are included in the Sydney Desalination Plant's Network Infrastructure Operator's Licence.
⁵ However the 2010 Metropolitan Water Plan is currently being reviewed and there remains uncertainty regarding the NSW Government priorities in securing Sydney's water supply and SDP's role and operating framework (see section 2).

⁶ To supply water to mitigate the effect of a public health incident or to ensure security of supply or network stability during periods of outages, unavailability or maintenance of water industry infrastructure in Sydney Water's area of operations.

⁷ In addition, the plant operators, Veolia, hold an Environmental Protection Licence for the plant under the Protection of the Environment Operations Act 1997.

ABOUT US

SDP was established by the NSW Government and was originally owned by SWC.

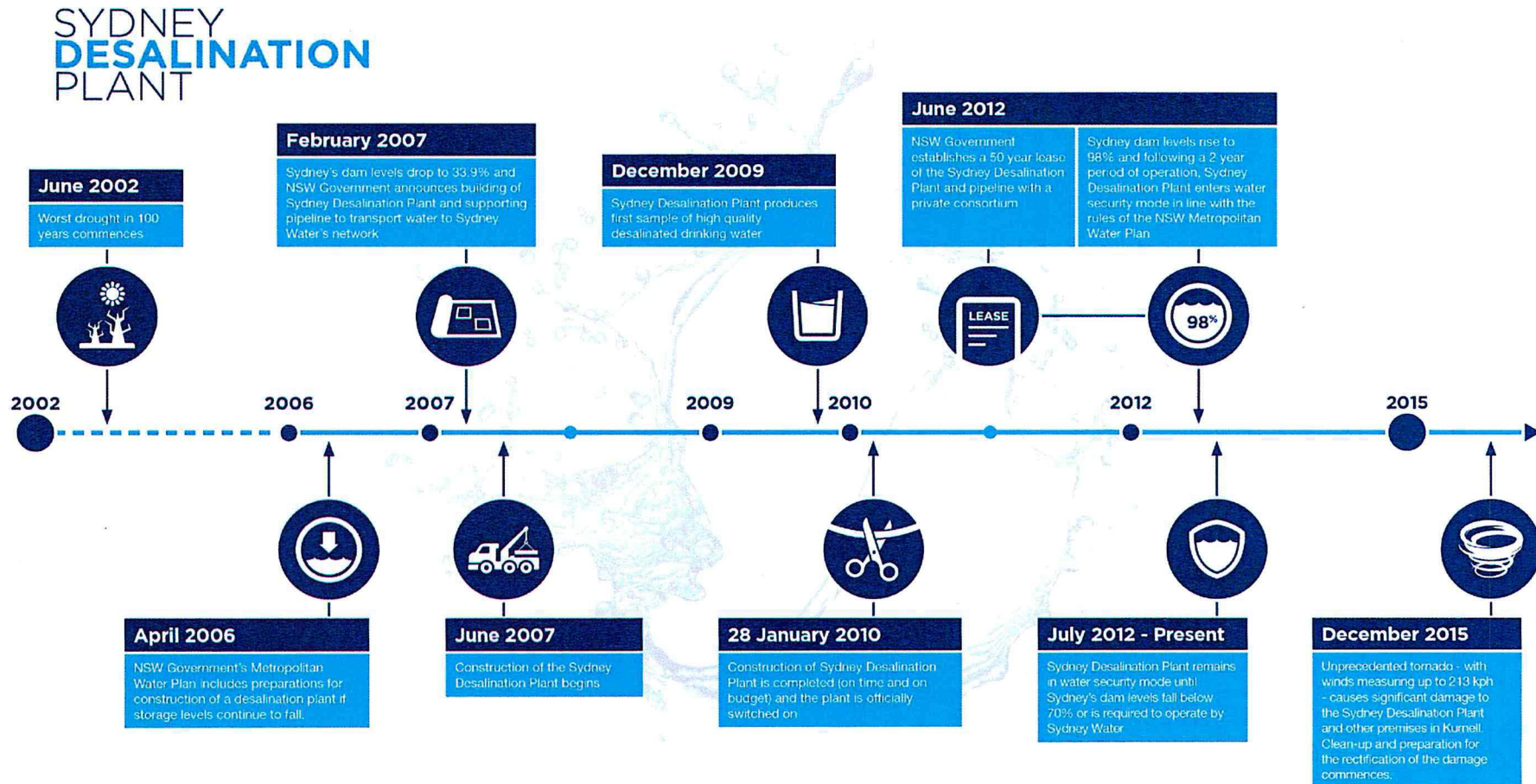
The construction of the SDP plant and pipeline took 3 years from 2007-2010, with the first desalinated drinking water delivered to Sydney in February 2010. The plant then ran continuously for 2 years providing high quality drinking water to the SWC distribution system, from 2010 to 2012 to prove plant capacity and reliability.

In June 2012, the NSW Government leased SDP for 50 years to a private consortium at a cost of \$2.3 billion. The lease included the plant and the pipeline connecting the plant to the water supply network and was backed by 50 year water supply contract with SWC (see Figure 2).

SDP is NSW's largest privately owned water provider and SDP's shareholders have significant experience in sourcing, financing, executing and managing infrastructure assets around the world. Veolia Water Australia is contracted to operate the plant under a 20 year contract.

SDP believes that the facility continues to provide a cost-effective means of underpinning water security for Sydney. SDP's private ownership provides financial incentives to continually improve service performance and cost efficiency and share these improvements with its customers.

Figure 2: The Sydney Desalination Plant: Our History



Source: Sydney Desalination Plan

2. CONTEXT AND CHALLENGES FOR 2017 REGULATORY PERIOD

Key Points

- SDP has been in water security mode since 2012 and it is likely that SDP will remain in water security mode for extended periods over the 2017 regulatory period.
- The 2010 Metropolitan Water Plan is currently being reviewed and there remains uncertainty regarding the NSW Government's priorities in securing Sydney's water supply and SDP's role and operating framework.
- There are a range of challenges over the 2017 regulatory period including restoring and testing the SDP plant following the December 2015 Kurnell tornado, ensuring SDP's assets are ready to restart when next required following an extended period of shutdown, and ensuring sufficient flexibility to enable SDP to readily adapt to any new role in water security and supply for Sydney which it may be asked to perform.
- SDP's priorities for the 2017 regulatory period include ensuring the facility continues to be able to reliably restart and operate after being in water security mode for an extended period.

WHAT ARE THE CHALLENGES FOR THE 2017 REGULATORY PERIOD?

Sydney's dam levels rose to 98% in June 2012 at the conclusion of the Proving Period and, under the rules of the NSW Metropolitan Water Plan, the SDP plant ceased production and went into water security mode. Under this mode, the plant does not produce water but is maintained in a state of readiness to be able to supply water when it is next called upon. According to the current operating rules determined under the Metropolitan Water Plan, SDP will be instructed to restart when Sydney's total dam levels fall below 70%.

While it is expected that SDP's water supply service may not be required for a number of years, SDP's water security role remains a critical element in securing Sydney's water supply.

There are likely to be a number of challenges in ensuring SDP can effectively fulfil its role in providing water security services over the 2017 regulatory period. These challenges result from the:

- tornado that caused significant damage to key elements of the SDP plant in December 2015 (see Box 1);

- current duration of the water security mode and the limited opportunity to test the operating condition of the SDP plant;⁸ and
- uncertainty regarding the future operation of SDP under any revised Metropolitan Water Plan and the impact of this on our operations, asset planning and cost structures.⁹

WHAT ARE PRIORITIES OVER THE 2017 REGULATORY PERIOD?

SDP has been developing its 5 year plan that sets out the services, costs and prices for the period 1 July 2017 to 30 June 2022 (the 2017 Plan). As part of this process SDP has engaged with its direct customer (SWC), as well as other stakeholders to better understand their priorities and preferences for this period and beyond — including the role their customers, stakeholders and the community expect SDP to play in meeting their water security needs.

While SDP is currently finalising the 2017 Plan, the priorities include:

- Restoring and testing the SDP plant following the Kurnell tornado that caused significant damage to the plant in December 2015 to ensure it is able to fulfil its water security role.
- Ensuring the SDP plant continues to be able to reliably restart and then produce 91.3GL/year of high quality drinking water following an extended period of being in water security mode.
- Ensuring SDP is equipped to operate in an uncertain environment in a way that optimises the SDP's role in water security.
- Ensuring SDP continues to explore opportunities for further efficiencies.

⁸ While the current duration of the water security mode is consistent with the rules under the Metropolitan Water Plan and reflects the relatively strong inflows to Sydney's dams, such an extended period of shutdown of a desalination plant is virtually unprecedented. This gives rise to challenges for SDP in simultaneously ensuring that a likely period of continued shutdown is managed in a way which minimises costs but which also provides for an optimal restart when the plant is next called on to produce water (for example, to help manage water shortages in response to shorter-term emergencies or outages in Sydney Water's network).

⁹ The last 5 years has highlighted that it can be difficult to accurately foresee how the plant will be operated over any given period. This reflects not only the underlying climate and rainfall conditions, but other factors (e.g. behavioural changes in average water consumption) which might conceivably lead to a change in future operating rules under the Metropolitan Water Plan. It is also possible that the SDP will be required to supply water outside of the operating rules.

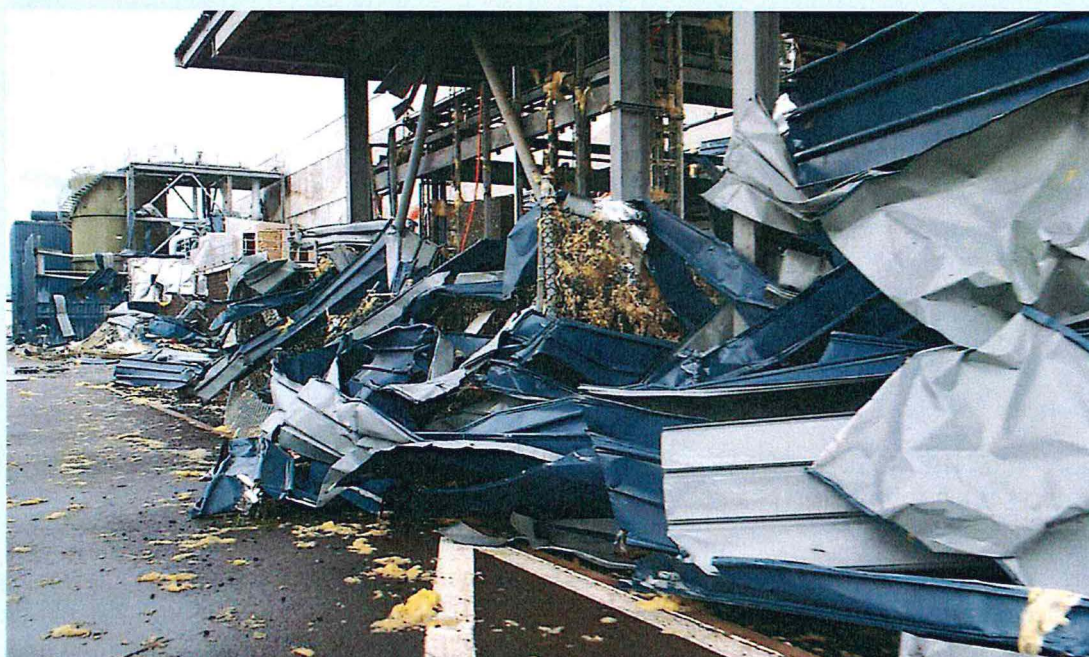
Box 1: Responding to the December 2015 Sydney Tornado

In December 2015 an unprecedented tornado caused significant damage to the SDP plant and other premises in Kurnell. The high winds and resulting debris caused widespread damage across the site. The damage assessed includes:

- damage to the building structures housing plant including the roof structures of some buildings;
- damage to plant items within those buildings; and
- a loss of preservation fluid to the membranes.

To ensure that SDP is able to fulfil its water security role under the Metropolitan Water Plan, SDP is actively responding to the unprecedented damage, including engaging with insurers. The reinstatement process for the SDP includes five phases with key activities and steps undertaken outlined in Figure 3.

Damage to the Reverse Osmosis Dosing and Clean in Place Systems



Source: Sydney Desalination Plant

Figure 3: Responding to damage caused by the December 2015 Sydney Tornado



3. ENSURING THE REGULATORY SETTINGS FOR THE 2017 REGULATORY PERIOD PROMOTE OUR CUSTOMERS' LONG-TERM INTERESTS

Key Points

- The regulatory settings in IPART's 2017 Determination will significantly influence the risks and incentives SDP faces over the 2017 regulatory period, which in turn will influence its ability to respond to current and future challenges in fulfilling the SDP's water security role.
- While the 2011 Determination was undertaken in challenging circumstances, many of the regulatory settings in the 2011 Determination are likely to remain 'fit for purpose' over the 2017 regulatory period.
- However there are opportunities to refine elements of the 2011 Determination to ensure the regulatory settings in IPART's 2017 Determination facilitates SDP effectively fulfilling its evolving water supply and water security role for the long-term benefit of customers.

WHAT ARE THE REGULATORY SETTINGS THAT ARE MOST LIKELY TO POSITIVELY AFFECT THE SERVICES WE PROVIDE AND PRICES WE CHARGE?

The regulatory settings in IPART's 2017 Determination will significantly influence the risks and incentives faced over the 2017 regulatory period and beyond, which in turn will influence the ability to respond to current and future challenges in fulfilling SDP's water security role.

In SDP's view, IPART's 2017 Determination is most likely to positively affect the services it provides and prices charged (and thus be 'fit for purpose') if it ensures that:

- There are incentives and funding to invest, operate and maintain a safe, reliable and responsive water supply and water security service that is valued by Sydney Water and its residential and business customers;
- There is a reasonable opportunity to recover efficiently and prudently incurred expenditure on the SDP plant and pipeline consistent with an efficient allocation of risk between SDP, SWC and its residential and business customers so that it supports continued access to financing;
- The regulatory settings appropriately balance stability and predictability to minimise regulatory risk and promote investment in long-lived assets (and continued access to financing) yet are sufficiently flexible to be capable of efficiently responding to the

inevitable uncertainties associated with SDP's operating framework and SDP's costs within this framework;

- SDP's regulatory and financial incentives or interests are aligned with those of SWC and its residential and business customers as well as the broader community — for example, by providing incentives to optimise SDP's role in water security and to pursue ongoing cost efficiencies.

DO THE REGULATORY SETTINGS IN THE 2011 DETERMINATION REMAIN 'FIT FOR PURPOSE' OVER THE 2017 REGULATORY PERIOD?

While the 2011 Determination was undertaken in challenging circumstances — including a compressed timetable and with little to no observable SDP operating performance — many of the regulatory settings in the 2011 Determination are sound and likely to remain 'fit for purpose' over the 2017 regulatory period.

To assist IPART, stakeholders and the broader community SDP has developed a 'traffic light' system that clearly and transparently highlights which elements of the regulatory settings in the 2011 Determination may be 'fit for purpose' over the 2017 regulatory period, in SDP's view. Based on this assessment, SDP has allocated to each element one of the following categories:

- Little to no refinement to remain 'fit for purpose' over the 2017 regulatory period ('green light')
- Moderate refinement to be 'fit for purpose' over the 2017 regulatory period ('amber light')
- Material adjustment to be 'fit for purpose' over the 2017 regulatory period ('red light').

In developing this preliminary position SDP has:

- Analysed the material changes that have occurred in the policy, regulatory and commercial operating environments and their implications for SDP and for SWC and its residential and business customers over the 2017 regulatory period.
- Engaged with its direct customer (SWC) as well as stakeholders to discuss their priorities and preferences in relation to our service and safety standards, and our tariff structures over the 2017 regulatory period. Further engagement is planned prior to SDP providing its formal submission to IPART.
- Reviewed the evolution in regulatory settings in a range of infrastructure sectors in Australia and overseas and their applicability to the regulation of SDP's maximum prices over the 2017 regulatory period.
- Considered IPART's 2011 Determination and the extent to which it provides for the recovery of the efficient and prudent costs required to operate and maintain the SDP assets and the incentive and risk management framework necessary during the 2017 regulatory period to allow SDP to effectively fulfil its water supply and water security services under the Metropolitan Water Plan.

- Interpreted 'fit for purpose' as being those regulatory settings that are likely to be consistent with the standing Terms of Reference¹⁰ and address the challenges over the 2017 regulatory period in a way that best promotes our customers' long-term interests.

SDP's preliminary views on the extent to which elements of the regulatory settings in the 2011 Determination may be 'fit for purpose' over the 2017 regulatory period are summarised in Figure 4.

¹⁰ The Government has issued a standing Terms of Reference to IPART in respect of regulation of SDP.

Figure 4: Are the regulatory settings in the 2011 Determination likely to be 'fit for purpose' over the 2017 regulatory period?

Form of regulation		
Length of determination period	A 5 year determination period is an appropriate balance between the risk of structural changes in the industry (with resulting impacts on forecast costs) and the need to minimise regulatory instability and the administrative costs of more frequent price reviews.	✓
Mode based pricing	Mode based pricing - that establishes the revenue requirements and prices for each operating mode - reflects the operating characteristics and costs of operating and maintaining the SDP across different modes, as envisaged under the Metropolitan Water Plan	✓
Price control mechanisms	Greater flexibility may be appropriate over the 2017 regulatory period to ensure SDP has incentives (and earns sufficient revenues when operating) to respond to requests from its customer	○
Incentive framework		
Efficiency Adjustment Mechanism (EfAM)	The current specification of the EfAM is unlikely to provide strong financial incentives to improve operating efficiency over the 2017 regulatory period given the potential different operating modes of the SDP	○
Abatement mechanism	SDP supports an abatement mechanism to incentivise water production however the current mechanism in the 2011 Determination requires some refinement to ensure that it provides the correct incentives and aligns with customers' interests and the objectives of the Metropolitan Water Plan	○
Risk management framework		
Mechanism to manage costs associated with uncontrollable and unforeseen events	Unlike other regulatory frameworks governing infrastructure providers, the 2011 Determination does not include a targeted mechanism to manage costs associated with unforeseen and uncontrollable events, resulting in SDP bearing significant risk (with impacts on SDP's risk profile), with the potential for inefficient price signals to be sent to customers regarding the costs of water security services	✗
Pass through of the network component of SDP's energy costs	The 2011 Determination's pass through mechanism for electricity network charges remains appropriate given significant uncertainty with electricity network prices over medium term (i.e. AER merits review and judicial review processes)	✓
Energy adjustment mechanism (EnAM)	The current specification of the EnAM remains broadly appropriate given it results in a reasonable allocation of energy price and volume risk between SDP (who has little control of when it operates), Sydney Water and its household and business customers, and continues to incentivise SDP to manage its energy costs	✓

Approach to setting the 'building block' revenue requirements for our water supply and water security services		
Rate of return	Current approach to setting rate of return broadly reflects funding costs and systematic risks facing SDP	✓
Depreciation	The 2011 Determination's assumed asset lives may need revision to reflect pipeline design lives to ensure efficient price signals are sent to customers regarding the costs of water supply and security services	○
Energy costs	The 2011 Determination's approach to setting energy costs exposes SDP to significant price risk given its long-term contracts which are an efficient means of procuring energy for long-term assets	✗
Energy consumption	The 2011 Determination's energy consumption assumptions are consistent with the design of the plant and provide an incentive for SDP to reduce consumption, which will benefit customers	✓
Other operating expenditure	The 2011 Determination did not need to consider the costs associated with an extended period of water security nor did it consider the costs of an efficient standalone organisation, resulting in revenue requirements that do not reflect the efficient costs of providing water supply and water security services	✗
Tariffs and charges		
Price structures	The 2011 Determination's structure of fixed and variable modal charges reflects the cost structures of SDP, ensuring efficient price signals are being sent to customers relating to the costs of water supply and water security services	✓
Re-start charges	The 2011 Determination's restart charges are likely to materially understate actual costs of restarts following period of extended water security (incl. the cost of membrane replacement, additional energy and 'pipeline flushing' requirements), impacting SDP's incentives and ability to meet its water security role	✗

SDP will provide more detail on how best to address these issues in its formal submission in October. The October 2016 submission will also provide further detail on how it has considered any material changes that have occurred in the policy, regulatory and commercial operating environments and:

- The revenues required to operate and maintain SDP; and
- The incentive and risk management framework necessary during the 2017 regulatory period to ensure SDP can effectively fulfil its water supply and water security role under the Metropolitan Water Plan.

SDP welcomes IPART's willingness to engage to date and looks forward to continued engagement with IPART to ensure IPART's 2017 Determination facilitates SDP providing its water supply and water security services for the long-term benefit of customers.