Reply to IPART Issues Paper September 2016

Introduction:

Toonumber Water Users Group would like to thank IPART for the opportunity to provide comment on the Rural Water Issues Paper September 2016 and the potential alternative approaches to cost recovery and pricing in the North Coast and South Coast valleys.

Toonumbar Dam supplies water to the regulated sections of Iron Pot and Eden Creeks as well as an environmental flow into the Richmond River. The dam was completed in 1971 to provide water for irrigation, stock and domestic requirements. It has a capacity of 11,000ML of which 9681 is allocated in General Security licences. This allocation has decreased by 512ML since the 2010 Determination due to the surrender of allocation by licence holders.

The identified users of Toonumbar water who pay for their allocation and usage are mainly beef and dairy producers along with some cropping and pig farmers. Other users include a growing number of hobby and weekend farmers who access their riparian rights and recreational users who use the water for fishing, water sports and camping.

We are very pleased that IPART has indicated its preparedness to consider alternative approaches for the North and South Coast Valleys in its review of rural water pricing. The current review paradigm creates a price that will give a set financial yield from a given infrastructure. The focus being on the costs of operating and maintaining the infrastructure in its current use. There is no incentive for WaterNSW to consider the principles of demand and supply or seek alternative income sources to improve its earning capacity.

In considering the alternative approaches raised by IPART we would like to discuss the following issues:

1. Efficiency of supply and Demand Management
2. Affordability
3. Community Benefit

Efficiency of Supply and Demand

To review the efficiency of Supply, IPART reviews the efficiency of WaterNSW's operating and capital expenditures. Notional Revenue Requirements (NRR) and Full Cost Recovery Prices are then derived using the 20 year rolling average demand. There is an underlying assumption of maximum or at least appropriate utilization of the resource in question and a continuation of demand at similar levels. To achieve this WaterNSW must ensure their product (water) is saleable which necessitates an understanding of their customers and the elasticity of demand for water at different prices.
We do not believe WaterNSW or its predecessor "State Water" have taken this into account. In the 2009/10 Determination, State Water proposed an increase of 1195% to $360 per ML

for Toonumbar customers. IPART reduced this to an increase of 46% or $40.76ML by 2013/14. However, even this amount was beyond the affordability criteria for many of the users especially the beef and cropping farmers and usage reduced considerably.
The following criteria we believe can be used when reviewing supply and demand management:

1. The Ratio of ML Allocated to ML released
2. The Ratio of ML released to ML sold
3. Cost per ML sold (NRR / ML sold)
4. Cost per ML released (NRR / ML released)

Indicators such as these would show the movement of water from entitlement holders to non entitlement users such as the environment, riparian users and users downstream of the regulated system. Using the Impactor Pays approach becomes difficult when the Impactor cannot be easily identified or is changing over time.

The following table shows the Performance Indicators discussed above for Toonumbar Dam using predicted cost figures from the 2010 IPART Review and 2016 IPART Issues paper.

ML (General)	2011/2012	2012/13	2013/14	2016/17
Allocated : Released	10133 : 58236	10133 : 53049	10133 : 13861	9681 : Not known
Released : Sold	58236 : 99	53059 : 461	13861 : 835	Not known
NRR$'000/ ML Sold = Cost/ML	804/99 = $8121	796/461= $1726	774/835= $927	1,017/619 = $1,643
NRR$'000/ML Released	$13.80	$15.00	$55.80	Not known

From these figures it is obvious that the cost per ML sold is extreme and driven by both high costs and lack of demand. The cost per ML released however, is acceptable but identifying the beneficiaries may be impossible. It is also of concern to us that the Regulatory Asset Base (RAB) for Toonumbar will increase by 64% from 2009/10 Determination to the current Determination ending 2020/21.

Affordability

The farmers who currently hold the licences and water allocations are generally beef, dairy, pig or cropping farmers. For each of these groups the water has a value but beyond that value they will choose not to use it. Other users and potential users such as Councils, industries, riparian rights users, recreational users and environment also have a value for this water. However, they are currently not identified as a user or are outside the regulated area.

Reviewing the current users in order and using average north coast NSW figures, it becomes easy to see why the demand has dropped dramatically as the price per ML has risen.

Beef farmers have on average 100 breeders, sell 85 vealers/weaners and gross $42500. Average costs are $10000. If they use 150ML of water and have an allocation of 300ML, their water bill alone from WaterNSW in 2016/17 will be $8931. In addition to this they will have power charges and infrastructure costs. As a result most beef farmers now hold their licences as a form of drought proofing. Others have become very strategic in their use of water.

Dairy farmers and pig farmers have been the most resilient to the price increases but they too have a limit on the price they can pay. Irrigation costs for dairy farmers are now well above industry norm. According to Qld DPI figures, in SE Qld, just a couple of hours from Toonumbar, it costs dairy farmers between $50 to $150 to apply one ML of water to pastures. Dairy farmers on Toonumbar Dam are currently paying $200 per ML applied. (This cost includes water, power, labour and maintenance of infrastructure.) The effect on profitability is critical given that most of these farms operate with low returns. ABARES results for the 2014/15 Dairy Industry Survey show profit for North coast farms being 1% and averaging a profit of $36000.

Community Benefit:

Toonumbar Dam was built in the 1970's to help grow existing farm enterprises and encourage new farm enterprises. Farmers took up the opportunity for reliable water and the opportunity to grow their stock numbers using irrigated pastures. The dam became fully allocated and water was used mostly for irrigating pastures and crops.

The local community benefited from the multiplier effect that these farms had on other businesses. Farmers seeking new opportunities bought into the area and employment grew. There was also the advantage of additional water to towns and industries below the dam but outside the regulated area. Water from Toonumbar flows into the Richmond River and in dry times contributes significant quantities of good quality water to the Richmond Valley system.

The change to high priced Toonumbar water has had a significant effect on the entire community. It has become a deterrent to farmers seeking to move to an area with reliable water. Many farmers have moved away from regular irrigating and now only use the water as part of a drought proofing strategy. This has had the effect of reducing productivity and income from these farms.

Some property owners have attempted to sell their entitlements but found there is no market. They have resorted to handing in their allocation to avoid the ongoing costs.

Q 1. How should the cost of providing the bulk water services be recovered in valleys in which full cost recovery has not been achieved?

We understand and accept in general the principle of Impactor Pays. However, the assets to which this applies need to be efficient in their function. Toonumbar at the current rate of water delivery and level of costs ($1, 643 for each ML sold and operating expenditures increasing by another 17.8% for this determination) is not efficient in terms of water delivery to licence holders. It is therefore necessary to find an alternative arrangement to cover costs so that sustainable and realistic pricing arrangements can be made.
Rather than licence holders being the only identified Impactor who pays we believe it should be the individuals and groups who gain advantage now or sometime in the future. This would include local councils, industries, recreational users, riparian rights users as well as current licence holders.
We believe the Government through its Community Service Obligation should cover the costs while these alternative options are explored. Currently WaterNSW has started a review of the future of Toonumbar Water together with the Users Group and other interested parties. This is a pilot study which will be extended to Brogo Dam where the same issues apply. Until this study is complete we would recommend that costs be covered by the State Government as a CSO.

Q. 2 What principles or approaches should we use to assess the efficient costs of services in valleys that are well below full cost recovery?

Currently the efficient costs of services is based on the assumption that the primary role of the dam is to provide water to the licence holders. This assumption together with the impactor pays approach has resulted in unacceptable prices being charged for the water.

However, if the approach is broadened to include all of the benefits provided by the dam, the costs will be spread across a much larger group of beneficiaries. Beneficiaries would include the environment through the provision of environmental flows, the local community through the provision of recreational activities and as a secure water storage for future urban growth, riparian rights users and current licence holders. Having established the full level of services, the efficient costs can be reviewed against the total of these services.
This approach would also encourage WaterNSW to look at other service options that could help defray costs. An example would be hydro electricity. The dam had a hydro-electric plant which was closed in about 2010.

The assessment of efficient costs must also take supply and demand into account. The ratios and performance indicators listed above (page 2) can be used to bench mark the efficiency of water delivery to customers. Benchmarking could be against dams of similar size. This approach will encourage WaterNSW to expand rather than decrease its number of paying customers. When irrigators are the main users and we are in an area of relatively high rainfall, there are frequently long periods of time when no water is sold. Encouraging industries that require more regular water, such as piggeries would help provide a continuous demand. If pricing was made affordable, how much water would then be sold? There have also been suggestions to double the capacity of the dam to enable the sale of more water.

IPART's suggestion to compare operating costs to that of an optimal infrastructure has merit. A system that delivered water which could be more easily and cheaply applied for irrigation would justify higher water costs. Currently one of the real and extra costs associated with Toonumbar water is the pumping costs. The creek has a shallow, sandy base with steep banks and requires considerable energy costs to effectively pump the water for irrigation. Even the cost saving low pressure systems will add an additional $70 per ML to irrigation costs.
In summary we believe that assessing the efficient costs across a much broader level of services will provide the incentives to make better use of the asset now and in the future.

Q3. What principles should we use to determine prices in valleys that are well below full cost recovery?

When considering what principles should be used to determine prices it is necessary to understand the purpose of the dam. According to the WaterNSW website, Toonumbar Dam was built to provide a reliable supply of water for irrigation in the Richmond Valley, meet downstream stock and domestic needs, and provide flood mitigation and environmental flows. The website also states "the dam helps irrigate the Richmond Valley and supplies water to towns and farmers along Iron Pot and Eden creeks and the Richmond River. The dam is also a popular fishing and water sport destination".

Given that these are the main purposes of the Dam we believe the following principles should be considered when determining prices.

a. Affordability
b. Community Benefit
c. Water Availability - Supply and Demand Principles
d. The future value of the water storage

A. Affordability:

For Toonumbar to continue its purpose as an irrigation dam, the water must be affordable to users. There are several ways this could be done.

1. Prices could be bench marked against other areas where irrigation water is used in similar situations and like prices established. This would have the affect of stabilizing prices and giving farmers the confidence to purchase appropriate infrastructure for efficient irrigation.

2. A second option is a blended price. Currently the Coastal area of NSW is divided into 3 "Valleys". These have no actual relationship to physical river valleys. For example the North Coast Valley encompasses the Tweed, Richmond, Clarence, Bellinger and Hastings river valleys. The only Dam in the whole North Coast that is operated by WaterNSW for the benefit of agriculture is Toonumbar. Where as in the Hunter Valley there are several such dams. The South Coast Valley is much the same as the North Coast with just the one dam. If a new dam was built somewhere in the North Coast "Valley" then the costs to users would be a blended price between it and Toonumbar (as happens in the Hunter "Valley"). We recommend that for pricing purposes the whole of the coastal area of NSW be considered as one entity, as the current boundaries have no relationship to individual river valleys. This would give a price to the water provided to users on the North Coast and South Coast that would see potential increased usage in these areas. If the other recommendations in this submission were also adopted for the whole of the coastal area then the effect on the existing Hunter Valley users would be minimal. The benefit would be that increased usage of the Toonumbar and Brogo Dams would actually increase returns to WaterNSW

3. Another alternative is to base prices on the marginal cost of a group of users. The general maintenance of the dam would be borne by the community while the additional costs to supply these users would be charged to the users. This idea assumes that the asset is desired for some future use and there is a basic cost of maintaining it. Any costs above this amount would be payable by the current users. It is anticipated that the resulting charges would be substantially lower than current prices.

4. A forth option is to price the water according to the opportunity cost of water in the Richmond Valley. In this district all other irrigation licences are on unregulated systems. The opportunity cost would be the cost of unregulated water plus a value for the additional reliability of the water. This would be similar to the current method of pricing High Security water. This method recognises that in the long term farmers will relocate to areas where water is more affordable and provides an additional value for the reliability of the water sold.

B. Community Benefit

.The original intent of the dam was to encourage new and help grow existing enterprises in the areas supplied by the dam. The strategy was successful and many of the farms in the area increased their productivity and profitability through effective use of irrigation. There is a significant multiplier effect for the local community from these businesses especially in terms of employment, infrastructure support businesses and sale of product.The dam also provides water to maintain environmental flows which in turn provides water for riparian rights users and urban water for towns downstream of the regulated area. The dam is also a popular tourist and recreational destination.

All these benefits have a value that needs to be recognised and included. The Government Community Service Obligation is currently the way these benefits are recognised.

C. Water Availability - Supply and Demand Principles

Using the economic principles of supply and demand and understanding the elasticity of demand it is possible to match supply and demand over a period of time. Determining these price points would allow Toonumbar dam to sell all its available water and in doing so achieve its purpose for being and the community would benefit as well. During the 1990's when water in Toonumbar was very cheap, the dam had to restrict allocations in order to meet demand. Today, it rarely falls below 80% full.

D. The future value of the water storage

The future value of water storage should not be underestimated. Continuing urban growth in Northern NSW will put pressure on existing urban storages. There are opportunities to increase the holding capacity of Toonumbar if demand warranted. It is difficult to put a value on a future asset. However, if pricing policies ensure continuing current use of the asset, this in itself will ensure its existence into the future.

4. Given the low level of cost-recovery, are there any assets that should be excluded from the asset base and hence from prices. If so, what are the ongoing costs of these assets and who should bear them?

As discussed in the section on pricing, we believe a system of marginal costing would be appropriate for setting prices. The cost of maintaining the dam in its current state would be met by the community and operating costs relating to the supply of water to farmers would be used for pricing. We would anticipate that the community would cover most of the Capital costs in this situation and possibly a small percentage of operational costs.

Thankyou for this opportunity to make comment.

Toonumbar Water Users Group