

**THE LAKES R US P/L**

**Friday, 24 June 2005**

**Reply to the**

**NATIONAL COMPETITION  
COUNCIL**

**ISSUES PAPER**

**Concerning Access to Vacant Airspace  
in  
Snowy Hydro Ltd's Storage**

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**1. WHETHER IT IS APPROPRIATE TO DISTINGUISH AN INTEGRATED WATER STORAGE AND TRANSPORT SERVICE PROVIDED BY SNOWY HYDRO FOR THE PURPOSE OF PART 111A? ALTERNATIVELY IS IT APPROPRIATE TO CONSIDER THE COMPONENT SERVICES SEPERATELY OR REDEFINE THEM, INCLUDING ON FUNCTIONAL AND/OR GEOGRAPHICAL BASES? SHOULD FOR EXAMPLE THE SERVICE OF WATER STORAGE BE DISTINGUISHED FROM THE SERVICE OF WATER TRANSPORT AND THE SERVICE OF WATER CONNECTION? SHOULD SERVICES RELEVANT TO THE MURRAY RIVER SYSTEM BE DISTINGUISHED FROM THOSE RELEVANT TO THE MURRUMBIDGEE RIVER SYSTEM?**

Australia's most precious resource is water. Within the MDB there is a huge distribution system in place that has taken many years and billions of dollars to construct. Water users, and to some extent, the States have taken significant steps to use water more efficiently and effectively. The water users have now reached the stage where the storage of water for use at a more opportune time has become urgent. They see the value of their allocation being reduced, as they are unable to use their entitlement efficiently. Allocation holders have been given property rights to the water, in line with the COAG directive, and are unable to benefit. The Murrumbidgee Annual Allocation Plan 2004-5 at 5.3 states "Allocations are determined on the basis that all allocations may be used or transferred unless otherwise announced."

Clearly it is anticipated that all the allocation water will be used in the allocation year. The notion that it is somehow fair that the prudent water user that carries over their water to use it more effectively and then have it deducted off the next year's allocation is wrong. The water was allocated to the water user and then it is taken back on temporal grounds. On top of this is placed a 5% tax that is supposed to equate to the evaporation rate on this carried over water. Most if not all carryover water is used before the new allocation water amounts to much at all under general security in NSW, yet they are charged for approximately twelve months worth of evaporation losses in the storages.

LRU contends that water must be stored in the Snowy Scheme storages if water is to be used efficiently and effectively. There is vacant storage capacity there and it is also the only place with the flexibility to supply the Murray and Murrumbidgee River systems. The evaporation rate is the lowest of any storage in Australia and the stored water can be used to generate peak electricity. This flexibility and low evaporation are absolutely critical if productivity is to be maximized with water use in the MBD. The Murray and Murrumbidgee River systems must be run together for both water transport and storage of water as it is currently, for the flow of water conducted under the MDBC temporary trade system.

Permission will be required from the MDBC to enable the reduction in SHL's releases for the water to be stored at LRU's request. Permission will also be required from the relevant State Minister for the water to be transported to the water user, though the current temporary transfer documentation may suffice.

Economically, the benefits of storing water for the most optimal use are in the \$100's of millions of dollars of increased production to the nation each year. Socially, the gains in employment in regional areas in the MDB will stem the flow of the population to the coast. The ability to reduce the likelihood of stranded assets by the increased use of the temporary water transfer system will be enhanced by LRU's proposal. The environmental gains that apply occur with reduced runoff pollution from fields and pastures that were irrigated late in the water year to derive at least some benefit from the water allocation before it is lost. (Sales water in Vic traded down to \$25 megalitre in May'05). Environmental water may be stored for later use at a more opportune time with LRU in SHL storages for increasing flows at times that will be more effective to the environment, all the way down to the Murray Mouth.

It is important that LRU gain access to the storages of the Snowy Scheme. LRU is asking for water to be retained during the period of minimum release to water users. At 9.3 in the SMHEA –EIS at page 107 it states. "Under the proposed Snowy Water Licence, Snowy Hydro Limited would be permitted to trade in the security of supply services associated with the timing of water releases from the Scheme, provided it meets its assured annual release obligations to irrigators".

The COAG directive that water must go where it is the most productive substantiates the need to store the water in SHL storages as it is capable of being transferred to either the Murray or Murrumbidgee systems, subject only to flow restrictions at various points during transport. More than 1 million megalitres flow down each of these systems each year to water users. It is vital that this water can be diverted to where it will derive the most benefit to the nation.

During the temporary trading of water between the Murray and Murrumbidgee River systems, Snowy Hydro assist by increasing or decreasing the amounts of water released into each of these systems to balance the trade. Snowy Hydro already changes the timing of release for the benefit of the temporary water trade. LRU will require permission from the MDBC to alter the timing of release of water from SHL's storages.

**2. WHETHER IT IS APPROPRIATE TO DISTINGUISH AN INTEGRATED WATER STORAGE AND TRANSPORT SERVICE PROVIDED BY STATE WATER FOR THE PURPOSE OF PART 111A? ARE THERE SEPARATE**

**COMPONENTS OF THE WATER STORAGE AND TRANSPORT SERVICE THAT SHOULD BE CONSIDERED SERVICES IN THEIR OWN RIGHT FOR THE PURPOSES OF PART 111A?**

The transport and storage of water is integrated. Flows of water increase and decrease for many reasons including rain events, allocation usage, environmental considerations and anticipated supply demands. The temporary transfer system is operated by the MDBC within the MBD and LRU believes that this system operates from the upper reaches of the Murray and Murrumbidgee system storages and carryover operates currently in both of these systems. Access will be required to the NSW State Water owned Hume Dam in the Murray system, to facilitate the storage and transport of water. Access will also be required to Blowering and Burrinjuck Dams for storage and transport of water in the Murrumbidgee system. Carryover water is currently accounted for and withheld at the end of each water year in both these systems.

LRU believe that the current application forms for temporary transfers are sufficient to transport LRU's customer's water throughout the MDB. Permission may be required to transport water within the relevant State, from that State Minister.

At the commencement of the new water year, this carryover water is applied to the allocation, which carried the water over. LRU believes that this process will apply to water stored in SHL storages when it is released to either the Murray or Murrumbidgee systems.

If the NCC doesn't agree that the water can enter the temporary water transfer system, then it should decide what inhibits this process and rectify it by seeking access, for LRU, to the impost so as water can be used efficiently and effectively. The precedent for carrying over water has been established within the NSW systems of the Murray and Murrumbidgee Rivers. The process of transferring this carryover water throughout the areas applicable to the Murray and Murrumbidgee systems occurs now as some carryover water is sold from NSW water users and transferred down to SA. LRU believe that water released from SHL storages into Murray and Murrumbidgee storages must have the same rights as all other temporary transfer water to facilitate its effective and efficient use.

**3. THE EXTENT TO WHICH THE DEFINITION OF A WATER STORAGE AND TRANSPORT SERVICE IS GENERALLY UNDERSTOOD AND**

## **ACCEPTED WITHIN THE WATER INDUSTRY IN COMMERCIAL AND REGULATORY CONTEXTS?**

The reading and understanding of the definitions of water transport and storage services in the context of 111A of the TPA is very limited within the water industry, particularly the irrigation sector. Some participants have studied the definitions and its implications, particularly since LRU sought access to SHL storages.

### **4. WHAT IS THE NATURE OF THE SPECIFIC FACILITIES AND ASSETS REQUIRED PROVIDING EACH WATER STORAGE AND TRANSPORT SERVICE AND OWNERSHIP OF THESE ASSETS?**

LRU asks that access be declared on the entire Snowy Hydro Scheme .That is all storages, connecting tunnels, pipes, streams, switch gear, valves and any other asset that is required to store and transport water in the Scheme.

The storages include Guthega Pondage, Bourkes Gorge Intake, Kancoban Regulating Pondage, Geehi Dam, Jindabyne Dam, Island Bend Pondage, Burrungubugge Intake, Lake Eucumbene, Tantangara Dam, Tumut Pond Dam, Tooma Dam, Tumut Pondage, Talbingo Dam and Jounama Pondage.

These storages make up the storages of the Snowy Hydro Scheme which is controlled by SHL and owned by NSW (58%) Vic (29%) and the Commonwealth Governments (13%) and will supply the service that LRU wants access to.

LRU wants access to the vacant airspace in these storages. If water is not released as it is under the current interpretation of the arrangement governing SHL releases, then it would take up space that was not previously occupied by water in the storages at that time.

This stored water will be using vacant airspace in the storages until it is called on by the water users, who may negotiate a time of release with the electricity industry on the Future water release market operated by LRU. The airspace is of no value to anyone currently and LRU can convert this waste of space into something very beneficial to its customers and the nation

The transport services are those that are required to transport the water that may be stored in the various storages that make up the Snowy Scheme, to the point of release from the Snowy Storages. The water will then make its way down to the storages of the Murray and Murrumbidgee systems

LRU contends that the regulations governing the timing of release allow for trade of timing of release, on a commercial basis, currently. This is not about extracting water or purchasing water, it is about varying the timing of release.

In the event that the NCC deem that access must be sort to the transport facilities that make up the transport system within the Snowy Scheme down to the final release points at the headwaters of the Murray and Murrumbidgee systems, then LRU will require access to the, Eucumbene –Snowy Tunnel, Snowy- Geehi Tunnel, Eucumbene River, Snowy River, the pipe and valve connecting Geehi Dam to the Swampy Plains River, the pipe and valve through Island Bend Pondage into the Snowy River, the tunnel from Geehi Dam to Murray1 Power Station and onto Murray 2 Power Station, and on to and through the Khancoban Regulating Pondage.

On the Tumut side LRU requires access to the, Eucumbene –Tumut Tunnel, Murrumbidgee-Eucumbene Tunnel, the pipe and valve from the Tantangara Dam to, and including, the Murrumbidgee River, Tooma- Tumut Tunnel, Tumut River, Tumut Pondage, the pipes that deliver the water to Tumut 1 and Tumut 2 Power Stations and on to the Talbingo Dam then into the Jounama Pondage, on into Blowering Dam, through this dam and into the Murrumbidgee River.

These are the transport facilities that provide the transport service within the Snowy Scheme, that LRU will require access to, to transport the stored water within the Snowy Hydro Scheme storages.

**5. WHETHER THERE ARE ANY “OTHER ASSOCIATED FACILITIES” THAT ARE NEEDED TO STORE AND TRANSPORT WATER FROM THE SNOWY SCHEME TO WATER USERS ALONG THE MURRAY AND MURRUMBIDGEE RIVER SYSTEMS?**

Carryover water is currently stored in both the Murray and Murrumbidgee systems. The temporary transfer system operates with both carryover water and temporary transfer water. The method of tabulating where the water is, and to transfer water to and from the large numbers of water users within the state and interstate already exists. This system is not perfect and it certainly isn't fast, it's expensive in places, but it works.

LRU contends that when the water is released from SHL storages, (which is where it was going to come from previously anyway) it will enter the Murray and Murrumbidgee systems and the normal temporary transfer rules will apply. LRU is asking for a change of release timing from SHL, on a commercial basis. LRU notes in 9.3 of the SMHEA-EIS that SHL is permitted to enter into these arrangements on trade with security of supply services already. The rules and regulations are in place to enact the storing and releasing of water to irrigators and other water users throughout the MDB.

The letter dated 3 MAY 2004 from Terry Charlton, Managing Director of SHL, maintains that SHL “is simply unable to enter into any agreement with LRU or any other third party in relation to capacity in its water storages.” SHL does have agreements, through the NSW Government, with third parties in the Murrumbidgee Valley. LRU believe that SHL is obliged to enter into an agreement with LRU on timing of release. The precedent is there and SHL should get on with LRU for their mutual benefit. No agreement has been entered into and LRU asks the NCC, that access be granted so that negotiations can begin between SHL and LRU.

If the storages below the Snowy Scheme are at or near spill level then the water would remain in the Snowy Scheme .LRU would advise its clients to purchase cheaper temporary trade water not in the Snowy Scheme, instead of running the risk of increasing the chance of a spill in the Hume and /or Burrinjuck and Blowering Dams. Temporary trade water would be cheaper when the lower dams are near spill levels. Usage is well down, the soil profile is full and there are few buyers and plenty of sellers.

LRU will require access to the transport and storage facilities from the Khancoban Pondage up to and including the Hume Dam and on through to the water users throughout the Murray system in the States of Vic , NSW and SA.

Access will also be required to the storage and transport facilities of Blowering and Burrinjuck Dams and through these dams. Access will also be required to the Murrumbidgee and Tumut Rivers, down stream to the delivery points of the water users within the Murrumbidgee system

## **6. WHAT IS THE EXTENT OF PHYSICAL INTERCONNECTION AND OPERATIONAL INTEGRATION AND COORDINATION AMONG THE VARIOUS FACILITIES AND SERVICES OF THE SNOWY SCHEME?**

Figure 1 in the NCC Briefing Paper April 2005, gives a good picture of the physical interconnectedness of the Snowy Scheme. The Scheme has the ability to trade on and off in the NEM within seconds so its operational integration and coordination among the various facilities and services must be at or near the world’s best practice. LRU does not have any evidence of failure of any SHL services.

The LRU access does not inhibit the production process and the SHL argument is a misconstruction of the intent behind the production process exception. The exception was to stop third party access to a facility in such a way that the owner of the facility could not use it for its production processes. That is not the case here.

**7. WHAT (IF ANY) WOULD BE THE PRACTICAL CONSEQUENCES OF DECLARING SERVICES PROVIDED BY DEFINED FACILITIES WITHIN THE SNOWY SCHEME (SUCH AS THE MINIMUM BUNDLE OF ASSETS IDENTIFIED BY LAKES R US IN BOX 2) AS OPPOSED TO THE SERVICES PROVIDED BY THE ENTIRE SNOWY SCHEME NETWORK?**

LRU was surprised that SHL chose to argue that controlled water could only exit the Snowy Scheme through turbines (3.8 SHL Briefing Paper 24 FEB 2005) which SHL deem as part of a production process. LRU denies that this is the case. Figure 1 SMHEA-EIS clearly shows that controlled water can travel down either the Swampy Plains River out of the Geehi Dam or the Upper Murrumbidgee River from the Tantangara Dam. Water is released into these rivers for environmental purposes. LRU believes that providing access to the entire Snowy Scheme may reduce the likelihood of access being granted and not being as effective as possible.

**8. WHAT IS THE CURRENT DEGREE OF PHYSICAL INTERCONNECTION AND OPERATIONAL INTEGRATION AND COORDINATION BETWEEN BURRINJUCK AND BLOWERING DAMS?**

LRU requires that the current method of temporary transfer be used to arrange the transfer of water user's water. The amount of water that will enter and exit these dams will be very similar to what would pass through these dams, normally, from season to season.

The degree of physical interconnection and operational integration and coordination that has occurred in the recent past will be sufficient in the future to operate the same amount of water. LRU is unaware of any new impediments to the operations between these two dams.

These Dams are owned and operated by NSW, State Water. Access and permission will be required for LRU and its customers to store and transfer water into and through these Dams.

**9. WHETHER IT IS APPROPRIATE TO DISTINGUISH WATER STORAGE AND TRANSPORT SERVICES FROM BLOWERING DAM IN ISOLATION OF BURRINJUCK DAM OR OTHER NATURAL WATERWAYS THAT FORM PART OF THE MURRUMBIDGEE REGULATED RIVER MANAGED AND CONTROLLED BY STATE WATER?**

The use in combination of both Burrinjuck and Blowering Dams is fundamental in the timely supply of irrigation water to the Murrumbidgee Valley. Restrictions in channel capacity occur from time to time in the rivers down stream from these dams. LRU asks that access be granted to the Blowering and Burrinjuck Dams, the natural waterways including, Murrumbidgee River and the Tumut River and all the necessary valves pipes and switch gear necessary that allow water to be transported from the Snowy Scheme through these dams and on to the water users who will be operating on temporary water transfers for the movement of temporary water from SHL's storages to the water users in 3 states.

State Water's Blowering Dam has an airspace rental agreement in place with SHL for up to 190,000 megalitres. This allows the rapid generation of electricity and contains the water without flooding the downstream inhabitants. Storage of LRU water from time to time in both the Blowering and Burrinjuck Dams may be required. This water would accumulate in these dams whether LRU was in operation or not. It is difficult to see why access should be required for something that would happen normally anyway. The water is owned by the water users it was allocated to or it is water purchased on the temporary trade and carried over. The current carryover system in NSW allows for storage of both allocated water and temporary trade water. In the event that LRU is incorrect in this assumption then access will be required to these storages to store the water released from SHL storages.

LRU believes that rights and obligations in the Snowy Water Licence already exist that allow the timing release altered water to pass through these rivers and storages. SHL can and have entered into agreements to trade in the release timing of water from its storages with the Snowy Borrow and Murrumbidgee water users. LRU asks that it be granted the ability to trade in the release timing of water. The amount of water remains the same less the evaporation, which is very minimal. LRU is not increasing the water. SHL is obliged to release this water to down stream water users under current legislation. All LRU asks is to vary the amount of released water from one period in time to another time. Both water users and SHL will profit from these initiatives. SHL will be able to exchange required release water for peak electricity generating water and water users will exchange water that they didn't want to use at the time of allocation to a more productive time in the future.

**10. IS THE STORAGE AND TRANSPORT SERVICE PROVIDED BY SNOWY HYDRO A SERVICE WITHIN THE MEANING OF s. 44B OF THE TPA OR DOES THE PRODUCTION PROCESS EXCEPTION AT PARAGRAPH (f) APPLY?**

The water storage and transport service provided by Snowy Hydro is a service within the meaning of s.44B of the TPA.

The Hamersley decision determined that A production process is complete once a commodity exists that is capable of being the subject of market transactions. SHL enter into contracts involving the sale of risk management products. These risk management commodities are sold at up to 5 years in advance of the risk product being required. Other institutions deal and profit, in risk management products and have no means of electricity generation at all so the generation of electricity is not essential to this commodity. SHL, CFO Stephen Mikelsen is quoted in CFO (11/2003), a magazine reportedly at the business end of business as saying “we provide risk management solutions for the market in so many ways. We’re just as much about having the ability to produce electricity as actually producing it”. Some 60% of SHL revenue comes from writing complex derivatives deals with counterparties in the NEM is also reported in the article.

There is a risk in selling a water/rain based product if rainfall patterns change or runoff figures decrease. Storing water by allocation holders with LRU will reduce that risk.

LRU contend that with access, SHL will have more water in the Above Target class to back the risk management products and produce peak electricity. This will benefit SHL and the electricity industry, particularly in the event of reduced water inflows to SHL storages due to global warming and or the effects of greatly increased transpiration in the fire effected catchments. Contracts involving electricity products produced in the Snowy Scheme in the NEM will increase in value as there will be more water in store. The proposed Future Water Release Market will enable water users and electricity users to derive the maximum value from this precious resource by the trade in water releases over time. SHL have been selling electricity at and below \$12MWh (Nemmo Website Snowy, month January 2005), which is below the cost of production of thermal power stations. This is due to SHL having to comply with irrigation demand and the minimum release rules. Currently there is no method for the irrigation industry to benefit from water release timing and it continues to use water at inopportune times, as there is no method to store water for this mutual benefit. LRU’s access will enable water users to sell release rights to the electricity industry. This is in the public interest.

Releases from controlled water storages can occur from Tantangara Dam into the Upper Murrumbidgee River and also from the Geehi Dam into the Swampy Plains River without the water entering Snowy Hydro's turbines.(figure 1 of NCC Issues Paper APRIL'05) The water released in this method does not enter the claimed production process at all. The benefits of utilizing the energy produced by gravity to produce electricity would not be derived if water was diverted around the turbines At a gross production figure of \$18MWh for water lost by being released through the turbines by SHL (this equates to \$34.20 per megalitre) the irrigation industry could produce up to \$450 a megalitre, if the timing of release was optimal for agricultural production. There would be a net benefit to the nation.

**11. ARE THERE PARTS OF THE SNOWY HYDRO FACILITY NOT INVOLVED IN ELECTRICITY PRODUCTION THAT COULD BE USED TO PROVIDE WATER STORAGE AND TRANSPORT SERVICES?**

Most of the water storage in Snowy Hydro is used to store water for electricity production. Water can and is diverted around the turbines for environmental flows. A large proportion (1 million plus megalitres) of the vacant airspace in Snowy Hydro is not involved in electricity production and can be used to store water. Water can be transported out of the Snowy Scheme and into the Murray River by releasing water from the Geehi Dam into the Swampy Plains River. Water released from Tantangara Dam enters the Murrumbidgee River. These are parts of the Snowy Hydro facility that are not used to produce electricity.

**12. ARE THERE ANY OTHER CIRCUMSTANCES IN WHICH THE PRODUCTION PROCESS EXCEPTION AT PARAGRAPH (f) COULD BE CONSIDERED TO APPLY?**

LRU contends that the production process exception was lost on two grounds. The sale of A marketable product, being risk management commodities at up to 5 years in advance and the fact that water can be diverted around the turbines. Also the water is not processed in any way. The energy source is gravity not water.

LRU strongly believes that access to the vacant airspace in SHL storages will benefit the electricity industry, the environment and the irrigation industry and will increase productivity growth. This is in the national interest.

### **13. WHAT IS THE REASONABLY FORESEEABLE DEMAND FOR WATER IN THE MURRAY, MURRUMBIDGEE AND SNOWY RIVERS OVER THE MEDIUM TO LONG TERM?**

The demand for water has outstripped supply in the Murray and Murrumbidgee systems for many years. The late 1980's was a time when irrigation development and demand really took off. This problem led to COAG and the MDBC implementing the cap on water diversions in 1994. The Snowy River's demand has changed dramatically, from 2% of flows in its upper reaches for the previous 30 years approximately, to the level of up to 28%, some time in the next 10 years.

The impact of the environmental movement on water demand in any river system in Australia is extremely difficult to forecast and is virtually impossible to predict in the politically sensitive Murray Darling Basin (MDB). In trying to predict the future, you must look back at the history of events.

The factor of global warming, which is now of great significance was considered a very low priority issue even five years ago, and is now right up there with protecting the environment which was also relatively unimportant to the general public, 13 years ago.

Reforestation of the areas destroyed by fire in SHL's catchments will cause significant reduction in runoff. The greatly increased transpiration that will commence when the new growth of the decimated old forest is at its maximum levels will have a drastic effect on inflows. LRU contacted SHL asking for details and figures of reduced runoff calculations and was informed by phone that it was a very broad question and difficult to answer. During the conversation it was mentioned that 65% of the Kosciusko National Park (KNP) was damaged by fire but no runoff reduction figures were given. Approximately 486,000 hectares were destroyed in the KNP and SHL catches approximately 60% of all water that runs off the KNP.

Around 2500 gigalitres enter SHL storages each year, although flows can vary between 40% to 200% from the average. These figures are historical inflows. A reduction of only 10% for the effect of reforestation on water inflows in the coming years of 2007 and on, until the burnt areas regain their maximum density, some time in the 2040's, will equate to a reduction of 250 gigalitres a year. To take 250 gigalitres a year out of the supply side will have a drastic effect on what water general security water users have, as this is where the reduction will take effect. Most other users have high security water entitlements and the environmental water has precedence over general security water. A reduction of 10% of water inflows will also effect SHL electricity generation and the sale of risk management products related to the level of above target water held by SHL in the future.

The 250 gegalitres is an assumption by LRU. SHL would have more accurate data. The figure could well be higher. LRU tried to obtain this information on the 20/05/05 from SHL's environmental section with no success. Whilst the 250 gegalitres is an assumption by LRU, the increased consumption of water by the vegetation within the catchment is not. LRU believes that its application for access to store temporarily traded water in SHL's storages will greatly assist water users and SHL itself to deal with this serious threat to supply.

Any reduction in inflow will reduce SHL's 'Above Target' water as SHL is obligated to supply 1062 + 1026 gegalitres per year to the Murray and Murrumbidgee River systems. The Above Target water is replenished at the average rate of 312 gegalitres per year. If we are moving into a period where this inflow will be reduced by increased transpiration and or global warming, then the ability for SHL to capture financial benefits from the supply of peak electricity will be greatly reduced.

The effect of global warming on rainfall both within the catchments of SHL and the water users of the MDB could be profound. Rainfall records for the last 200 years have been used by various institutions to determine what may or may not happen with the effects of global warming. A look at the sand hills around Berrigan and many other areas of the Riverina may indicate a much drier period over the last 500 years or more, when these sand hills were formed by wind erosion. In the last 30 years many records for weather events have been broken and some of these, more than once. This would indicate that 200 years is much too short a period to try and establish average patterns and far too short to ascertain trends. LRU believes that storing temporary traded water in the safe unused airspace in SHL will assist water users and electricity users, especially in NSW, greatly, in overcoming the uncertainties in supply of Australia's most precious resource.

#### **14. IS IT CHEAPER FOR ONE FACILITY TO MEET THE REASONABLY FORESEEABLE DEMAND FOR LONG TERM WATER STORAGE AND TRANSPORT IN THE SNOWY CATCHMENT THAN TWO OR MORE FACILITIES?**

The likelihood of any institution gaining the rights from the governments concerned or the people of Australia, to construct a dam for the uses proposed by LRU are extremely unlikely.

If, by some method which remains unknown to LRU, a licence was granted to construct another dam at the head waters of the Murray and Murrumbidgee Rivers, there would be very little water left to fill it. If the SHL storages are not full and SHL captures nearly all the water running west of the KNP, then it is highly unlikely that any water would be available for any other dam anyway. The storage must be able to release water into both the Murray and Murrumbidgee systems to maintain maximum flexibility in the temporary water market. This is the key driver in enabling water to go where it is the most productive over a short time. Anything less will reduce Australia's productive growth capabilities.

SHL contends that LRU failed to disclose existing proposals for the economic development of alternative storage facilities for allocated water in the Murray and Murrumbidgee river systems, downstream from the Snowy Hydro facilities.( 1.17 (A) SHL briefing paper to NCC 24/2/05)

SHL cannot seriously contend that 22,000 megalitres of storage at Wah Wah can assist water users in SA or Vic, let alone water users in Murray system in NSW. SHL shows a limited understanding in the benefits of storing water and the temporary trade on the efficient and effective use of irrigation water, if it believes the Barren Box Swamp is the best alternative to using SHL's wasted, vacant, airspace.

No mention was made of the enormous evaporation rate on that swamp or the fact that you can only trade down stream from this alligator weed infested swamp, which is a very small portion of the irrigation industry indeed.

LRU believe that under the "social" test of building a new facility that the new facility would fail. (10.2 (c) SHL briefing paper 24/02/05). No community can afford the luxury of not utilizing its assets to give affect to the most effective and efficient use of its most precious resource, water. There is vacant airspace in the SHL storages and it is socially unacceptable for them not to be utilized. Why SHL would go to the trouble of pointing out a swamp as being more socially responsible than storing water in the cold, deep, vast, vacant and flexible storages is very difficult to understand. These small off stream storages are for local short term use in flood mitigation and storing unused allocation water because of local rainfall events interrupting usage.

As outlined in previous submissions to the NCC, it is critical for the enhancement of Australia's productivity growth that the temporary water trade must be as flexible and fluid as it can be. The SHL storages offer the best solution socially and economically for this to happen. There is only economic madness in constructing a dam that cannot be filled with water because all the water is currently being conserved by a system of dams that have spilled once or twice in the last 40 years.

The social cost of constructing a new dam with a storage capacity of 800,000 megalitres of water in the knowledge that it would probably never receive any water would cost the government of the day in its position. The cost to the environment and the taxpayer for this useless asset would be more than the electorate would tolerate.

In terms of environmental considerations, return on assets, cost of operating the facility as against operating two or more facilities, flexibility of supply, evaporation and electricity production, it is far more practical if SHL allows LRU to negotiate access to its vacant storages for the benefit of water users, electricity consumers and the nation.

**15. WHAT IS THE LEVEL OF SPARE WATER STORAGE, TRANSPORT AND ELECTRICITY GENERATING CAPACITY (IF ANY) IN THE SNOWY SCHEME FACILITY OPERATED BY SNOWY HYDRO?**

Figure 2 in the NCC Issues Paper April 05 shows a diagram with water levels of the scheme's active storage capacity from 1972 to 1999. The maximum storage capacity is set at 7,000 gegalitres in its sixteen major dams (2.1.2 page 17 SMHEA-EIS). Average annual inflows are believed by SHL (in the same document at 4.2.1. page 42) to be around 2,500 gegalitres per year.

“Almost 76% of this capacity, or 5,300 gegalitres, is actively used to regulate inflows for electricity generation and diversion to the Murray and Murrumbidgee irrigation systems. The remainder is kept in reserve to cope with peak flows.”(Page 16 of SMHEA-EIS).

The inflow figure can vary from 40% to 200% in any year and does not take into account the variables that are now apparent with global warming and also the reduction in runoff that will be caused by the reforestation in the SHL catchment after the devastating fires in 2003. Both of these concerns on inflow arose after the EIS text was written.

It is obvious that if SHL have to release 1062 gegalitres into the Murray system and 1026 gegalitres into the Murrumbidgee system each year and less rain than generates this much runoff into the SHL catchment fails to fall in consecutive years, the storages will empty. This does not take into account events that might happen from time to time as it did in 1982 when the scheme was called on to generate electricity to avoid blackouts in NSW (PAGE 50 SMHEA-EIS). It must be remembered that SHL buy (\$16m 2004) and sell (\$1,782m in 2004, SHL Notes to the financial statements page 34) a huge amount of risk management products into the electricity market for up to 5 years in advance.

Sometimes SHL will actually be called on to back these positions with electricity generated by the vast generating capacity that SHL has. If all the worst case scenarios happened, the storage may empty at an unprecedented rate.

The scheme has the ability to store 7,000 gegalitres of water and has not reached more than approximately 5,200 gegalitres of active storage from 1972 to 1999 according to figure 2 in the EIS.

LRU is asking to store 800,000 megalitres and believes there is plenty of room for at least this amount to be stored in SHL storages. The threat of a spill event happening appears to be much less than the prospect of the storages emptying. Steps can be taken to reduce the effects of spill damage.

It must be remembered that the rivers high up in the mountains used to roar with the huge volumes of water well before the construction of the Snowy Scheme contained them, it is a naturally occurring event that has gone on for thousands of years.

Very little can be done about the continuing lower rainfall events that last for years, including cloud seeding, to reduce the devastating effects of drought on Australia's economy. LRU believe that storing temporary water for use at a more opportune time for the water users has virtually no downside for the water users, SHL, the environment and the nation while offering great benefits and large opportunities to water users, SHL, electricity consumers, the environment and the nation.

Transportation of water within the SHL storages must be very good as the scheme has enormous generation capacity. (3.1.1. SMHEA –EIS) States..."The ability to maximize generation is severely limited by the amount of water available. On average the scheme operates at only 15% of capacity (i.e. the average annual inflows to the scheme can be released through the Scheme's power stations operating at full capacity for only 15% of the time)". There is no restriction on transport within the Scheme.

Electricity production in the Scheme is limited by the amount of water within the storages that is available for power generation. The turbines and generators have the ability to consume the average annual intake of water into the Scheme in just 15% of the year. LRU's access to the storages would not make less water available to the turbines. The same amount of water will pass through them at a different time.

It would provide the electricity industry with greater security, as water will be stored longer in the Scheme. Negotiations with the owners of this stored water on its timing of release may well reduce the cost of peak electricity and also the cost of risk management products to the consumers of these commodities. The amount of electricity generated by the Scheme would not change though the value of this commodity would increase as LRU would seek to change the generation of electricity from a value of \$11/ MWH (which is a waste of release timing of water) to maybe \$30/MWH which is at least the coal fired generator's total cost of production.

## **16. WHAT IS THE REASONABLY FORESEEABLE DEMAND FOR ELECTRICITY OVER THE MEDIUM TO LONG TERM?**

The demand for electricity in the medium term will probably outstrip supply in peak periods. One of the reasons for this is the poor return on capital that would be realized on new generators and no company can afford to build something that may not produce a profit. LRU pointed this out in The NSW Energy Directions Green Paper which is from the Minister of Energy and Utilities, Frank Sartor, released on the 6<sup>th</sup> Dec04, in its supplementary submission to the NCC.

The green paper states that electricity demand will rise at 2% a year and peak demand spikes will rise at 4% a year. 10% of NSW generation was used for only 1% of the year. 1300 megawatts of generation capacity was used to meet 87 hours of peak demand. From current predictions 18% of generation capacity would be required for 1% of the year.

Current generation and interconnection capacity is unlikely to meet demand under normal circumstances and will not meet demand in exceptional weather conditions over the next decade.

LRU believes that storing unused allocation water from year to year, or longer, in SHL's storages will greatly assist SHL to be able to provide water for peak demand. The peak demand market will rise significantly according to the green paper. LRU and its customers would allow SHL, for a fee, to convert water that SHL releases now at \$11/MWH to peak prices which are often \$60+/ MWH. With more water converted for peak generation the price spike should not be as high. This would be of great benefit to NSW and the nation as volatility in supply of an essential services, hinders growth.

SHL have to supply 2088 gicalitres of water every year to the Murray and Murrumbidgee Rivers. Some of those water users may choose to carryover water into the next year by February or March. Some of those water users may negotiate a price that SHL could pay for the release timing of that water. Demand for base load electricity is rising slowly. Demand for peak electricity is rising rapidly and LRU is offering a solution for the benefit of all parties.

**17. WHETHER THE WATER LENDING MARKET AS DEFINED BY LAKES R US IN ITS APPLICATION IS A DEPENDANT MARKET FOR THE PURPOSES OF CRITERION (A)? HOW SUBSTITUTABLE IS WATER LENDING WITH OTHER TYPES OF WATER DEALING (TEMPORARY AND PERMANENT WATER TRADING AND LICENCE CONVERSION)?**

The water lending market in the MDB is almost totally dominated by SHL. SHL has offered hundreds of thousands of megalitres of water at different times and prices over the last few years under the Snowy Borrow arrangements. LRU has trouble identifying any other group or institution lending water for profit to anyone. There may be lending of water between friends and relatives. These are private deals and impossible to quantify on price or duration.

If you substitute one thing for something else it is important that there are similarities between these exchanges. Borrowing water implies that you must repay it at some time in the future which may prove very costly, going into a dry period. Some water users have signed up for the Snowy Borrow in recent years and this has been a great thing for SHL as they can run the water through the turbines to produce peak electricity twice.

The water is released at SHL's timing of release for the Snowy Borrow to commence then it is paid back after use by the water users, either by purchasing water from the temporary trade or from additional allocation, to be released again during peak demand. The Snowy Borrow water is returned to the SHL storages by a reduction in the amount released by changing of the timing of release. This arrangement is negotiated and approved by the MDBC and State Water. The water is then returned to the Above Target class of water which is later released at the discretion of SHL.

The water users on the other hand have to pay \$98 a megalitres (2004-5) just to borrow this water for a year. LRU believes this price is exceptionally high and would compete with SHL in this monopoly market if granted access.

The purchase of temporary water (\$85 megalitre May/ 2005) implies that you own the water to do what you like with; subject to supply and environmental restrictions in that water year and the purchase price, plus delivery charges, is the price charged to use this water on farm. Temporary water is not allocated; it is purchased from the temporary trade.

Permanent water is water that will be allocated to you every year; a high security water licence (\$1700 megalitre) will give you a much greater chance of receiving 100% of your licence entitlement over general security entitlements.

Some general licences can be converted to high security licences, though the system would not be able to cope if all general security licences were converted at the current rate of 50% i.e. 80 megalitres of general security water will be reduced to 40 megalitres of high security water. If that were not the case then general water users would not have received less than 50% allocation in any year. In Murray Irrigation the last 3 years have been below 50%.

To substitute one type of water for another is unlikely and would probably have happened by mistake. The difference in value between the above commodities is so great that some misleading or deceptive conduct may well have happened, if a deal had been struck, and the deal would unravel later, in a court.

#### **18. WHETHER ACCESS WOULD PROMOTE COMPETITION IN THE WATER LENDING MARKET, TRADING, AGRICULTURE AND ELECTRICITY MARKETS THAT DEPEND ON WATER STORAGE AND TRANSPORT SERVICES FROM THE SNOWY SCHEME**

There are no other lenders of water other than SHL with its Snowy Borrow facility and deals SHL have within the Murrumbidgee area. There may be water user to water user, water lending deals done, but these are small private family type deals and LRU does not know anyone that participates in them.

LRU and its customers would facilitate and participate in the lending of water for a fee. LRU and its customers would not be able to operate in this market until it had water to lend which may take some time after LRU gained access to the storages. Competition would then be greatly increased in the lending of water by LRU's customers as SHL currently have no competition in the lending of large volumes of water at all.

Competition in the water trading market would be increased. The volume of water that would be on the market at any time would be increased because water that may have been used unproductively may be stored with LRU. If granted access, the water owner may sell this water if the price is higher than what the owner can profitably use it for.

In Murray Irrigation, the temporary water market price was approximately \$85 per megalitre at 24/05/05 and at the commencement of trading next water year in July /August the price may reach \$200 per megalitre. Very little water will be allocated to general water allocation holders in the first three or four months of the allocation year and this drives the price up. Access by LRU would reduce this price spike as there would be more water on the market. There is no facility to carryover water in Vic or SA and limited ability in NSW. This limits the saver of water to gain and punishes the prudent and is not in the public interest. The general allocation holder also has to pay allocation holding fees that can add up to 10's of thousands of dollars and may receive very little water to cover this cost in some years. Carrying over water would give them some ability to defray these costs.

Access would promote competition in agricultural markets because water users would use the water more effectively and efficiently. The volume of this increase would promote additional competition between producers to supply the agricultural markets both in the short term and in contracts to supply in the medium term. The general security water allocation provides thousands of irrigators with the ability to use water when it's there. This has been a great thing during its evolution. Unfortunately consumption has now increased to the point where water users can use all the water that is available in the water year to produce a staggering volume of various commodities in one year and have a drought and very little water the next year. The over production of some commodities puts downward pressure on prices during the oversupply year and may generate a small return on capital if at all.

Irrigation can be a great aid to production in a drought but currently most of the water gets used in abundant supply years. Even prudent farmers are inclined to use water in good years, as they have to put up with the draconian system that is the NSW carryover or no carryover system at all. These prudent farmers need some return on their very expensive allocations and have paid allocation-holding fees whether they receive 8% of allocation or 100% of allocation. LRU would make available a facility for these prudent farmers to carryover their share of water that was allocated to them in the allocation year, for use when it suits them and would not be used by someone else next year when the unused water is reallocated the following year.

The user has already paid for the allocation, as they do every year, and is denied the right to use it productively. Everybody else in the nation is expected to comply with the user pays principal. In this case the user has paid for the water that they cannot use. Water user's allocations increase towards the end of the allocation year and use of this increase is often not available for use at the most productive time, LRU would remedy this.

The dairy industry is not well served under the current system of general and sales water allocations. Water in Victoria got down to \$25 a megalitre in May '05 in the Sales Pool.

The optimum production value of irrigated pasture is 1.5 tonnes of dry matter produced for each megalitre of water applied to the pasture. 1 tonne of dry matter will produce 1500 litres of milk worth 30c at the farm gate. This equates to \$675 of milk produced from one megalitre of water at optimal production.

Under optimum production, dairying offers a good return on investment. Melbourne's largest export commodity is dairy product. The irrigated dairy industry is dominated by the area supplied by the Murray River.

If dairy farmers cannot store their allocation water for optimum production, there is an opportunity lost. It's not just the dairy farmer that loses. All of the people involved in the chain of processing in this huge food industry lose as well.

The loss to the dairy farmer by providing them with water that they are entitled to but cannot use at the opportune time is large. If this farmer uses the allocated water when it is available, the efficiency rate might only be .5 of a tonne of dry matter produced per megalitre applied. This reduction can occur as pasture maintenance and fertility drops because of insufficient water application in previous weeks or months. There is a great deal of skill required to maximize pasture production and reducing water at a critical stage can have a drastic effect on its productive capacity in both the short and long term.

The difference between the optimal pasture production and a pasture limited by the timing and or supply of water could be as much as 1 tonne of dry matter per megalitre. One tonne of dry matter produces \$450 worth of milk at the farm gate.

This highlights the loss that occurs when allocated; allocation water is restricted to the dairy farmers. The cost of rejuvenating these pastures is considerable, after they have been damaged by incorrect water application or drought. If these water users are given the opportunity to look after their own affairs, the optimum efficiency in water use will occur over time.

LRU believes the storing of water in SHL storages will greatly assist the production of milk .If 400,000 megalitres was stored by the dairy farmers with LRU to produce optimal pasture production the benefit could be up to\$180 million . This is calculated

by multiplying the 400,000 megalitres by the figure of \$450 per megalitre in milk value at optimal production. This is a farm gate figure and would be magnified many times through the production chain, for the benefit of productivity growth to the nation. This benefit could be realized 3 times in 10 years. Droughts occur approximately every 10 years. Rainfall patterns vary considerably within a year and make irrigation planning very difficult if maximum production from pasture growth and allocation is to be obtained. When a dairy farmer is short of water it is usual for most other dairy farmers to be nearly out also as most are striving for maximum production. General and Sales allocations usually rise toward the end of the allocation year as water enters the dams. This additional water may not coincide with optimal usage and happens at least every three years. The benefits to the dairy industry will be

Drought \$180 million divided by 10 years	= \$18 million per year
Timely water application; \$180M divided by 3 years	= \$60 million per year
Less 300,000mgl purchased @ \$40/mgl = \$12M: -3yrs	= -\$4 million per year
Total benefit at farm gate to the dairy industry	= \$74 million per year

SHL sell a large volume of electricity for between \$12 to \$35 per MWh according to the data available on the NEMMCO website in the Snowy section. This price or an increased price is likely to be achievable in the future. There would be a reduction in electricity production as the water accumulated in the storages. This would be made up when generation increased when the water was called on by water users. SHL would have plenty of notification of release timing as droughts usually start in autumn and cause major difficulties in the following late spring- summer period of agricultural production. Droughts usually occur in hot weather and higher electricity consumption with increased air conditioner use is likely.

The competition to supply markets with this increased production at a negligible cost will be enormous. The competition to purchase this milk by the milk companies is currently increasing on the rising world market. There would be increased competition in the labor market as more people are employed in milking, transport, farm renovation, rural suppliers, shops and the myriad of employment opportunities that present themselves when a commodity is produced at competitive prices. Competition in the temporary water trade would increase as the benefit derived from the water increased. More allocation holders would sell water at a greater price to these highly efficient producers, rather than use the water inefficiently.

If farmers have a reliable supply of water and can store water for the short to medium term, then land prices in these highly productive areas will increase due to the competition for land. House prices in the towns in the surrounding areas will also increase as buyers compete for accommodation.

Using water at \$25 a megalitre (Vic Sales Water, late May 05) because it is there instead of storing it for optimal use is inefficient and ineffective.

The use of water on various crops including, wheat, malting barley, canola, feed barley and fodder producing crops such as lucerne, clover and oaten hay, throughout the MDB during times of drought, produces a high return on the value of water. Wheat, malting barley and feed barley prices have all exceeded \$330 per tonne in the 2002 drought, as opposed to \$150 per tonne in the years either side of 2002. Canola exceeded \$480 per tonne and it normally trades at \$350. Lucerne hay reached \$600 per tonne and even low quality feed value hays were making \$200 per tonne when normally they would not sell.

These differences in the prices obtained for produce in a drought year compared to a normal rainfall year highlight the value of irrigation.

The problem is that most of the irrigation water is used in the previous years and the water users are forced to endure droughts with little or no ability to conserve water to maximize its benefit to the allocation holder or the nation.

Temporary water was valued at up to \$380 per megalitre during 2002. It is very difficult to generate a profit irrigating pastures and crops at this price if at all. Farmers are fully aware of the likelihood of droughts and floods and conserve fodder and grain for these occurrences. Water users would derive great benefit if water could be stored from one year to the next. The current system is more about using water in years of plenty than saving for a drought or year of tight supply. In the outline of price trends during droughts mentioned previously, it is easy to see that a water user irrigating a stand of lucerne during a drought with water saved from a year of low demand in which water was valued at \$30 per megalitre could add \$350 per megalitre to its value by producing lucerne in the drought. Not all the increased lucerne production would be valued at \$600 per tonne, though the stock that were kept alive and healthy because of its production could equal or exceed that value to the livestock industry after the drought, particularly breeding stock.

There are flow on effects from this to the local community and also Australia's export wealth with the exporting of meat as some livestock remain fat and are suitable for slaughter during a drought.

The rice industry is fully integrated in Australia with production, processing and marketing being carried out in a highly efficient manor. This industry competes in world markets and has lucrative contracts to supply. These supply contracts come under enormous pressure when drought restricts water to produce the rice. This also has a huge impact on employment in regional towns from Echuca to Wagga where processing and transport of rice and rice products is carried out. The rice industry has paid vast amounts of money to Snowy Hydro for the Snowy Borrow facility over the last five years. The rice industry could look after its own affairs concerning water security if access was granted.

The amount of water required to grow rice needs to be available before October if consumption is to match supply. This causes major problems for rice growers in years of low allocations at September or early October. If a grower plants rice on the

assumption that water will be available later in the year and it is not the rice grower must pay for water on the temporary water market. If the grower runs out of water the crop will die and expenses incurred in production will be lost. The price of water on the temporary market may exceed \$150 per megalitre. By the time the grower applies this water to the crop with charges and losses the cost may exceed any hope of profit.

Storing the water for greater security has huge benefits to the rice industry as production and marketing volatility would be greatly reduced.

The production of cereals from irrigated agriculture sustains end users and takes out the volatility in the price to some extent. Cereal demand is rising at a rapid rate and some forecasters have predicted a doubling of consumption over the next 20 years. Most of this additional consumption will be used by the chicken, beef and pork industries. These industries sell forward and need continuity of supply. The cost to these industries of losing markets or breaking supply contracts can be very large in the event of a drought limiting the supply of grain.

The risks and benefits of supply and demand in commodities are well known to water users and people in the industry. Techniques of water application are constantly being refined and water use efficiency is improving because of it. Water users could benefit by at least \$350 per megalitre if access to Snowy Hydro water storages was granted to LRU. This figure is derived by using the examples in cereal and fodder production outlined above. It is also the price difference between \$380/megalitre and \$30/megalitre. These were the prices between peak drought and supply glut of water. The addition of the timing release value obtained in the LRU Futures Market may exceed \$98 per megalitre; this was the amount SHL charged for the Snowy Borrow in 2004 on the grounds that this was the lost opportunity cost to SHL on the NEM. If the water is stored then it follows that there is an opportunity gain in the NEM for electricity production and sale of a similar magnitude. This value will increase in the short term as electricity consumption increases, particularly in peak market spikes in NSW according to the Green Paper released by the NSW Energy Minister, Frank Sartor on the 6<sup>th</sup> December 2004.

The current drought is expected to reduce Australia's economic growth by up to 1.5%. Up to 40% of Australia's agricultural production is derived from the area within the MDB. The majority of this production is reliant on irrigation. The effect of using most of the water before a drought comes at a great cost to Australia. The main reason that this situation occurs is because water users do not have the ability to carryover water at all or without penalty.

The storage of up to 800,000 megalitres is proposed by LRU. The storage of approximately 400,000 megalitres at different times for the dairy industry was mentioned on page 20 of this document. The remaining 400,000 megalitres is likely

to produce a net benefit to the water user of \$350 per megalitre during a drought, depending on the length and severity. Not all the water users, storing water in Snowy storages with LRU, will wait for the next drought to benefit from the storage of their water. The price on temporary water exchanges within the MDB vary from \$25 per megalitre to \$200 per megalitre, from time to time in years when general allocations reach 40-55%. Stored water may be bought and sold 5 times in 10 years with a benefit to the water user of approximately \$130 on each trade. If 400,000 megalitres were traded in this range, the benefit to water users would be approximately \$260 million over the 10 year period.

Benefit to irrigated agriculture, grain and livestock over a 10 year period/400,000 mgl	
\$260 million:- 10 years	= \$26 million per year
Benefits to the dairy industry as on page 20	= \$76 million per year
Total Net benefit to irrigated agriculture	= \$101 million per year

The multiplier effect will ripple through the national economy adding vast amounts of additional revenue with some analysts using the factor of up to 5 times farm gate value to the economy.

When the Australian dollar falls and peak electricity values increase then this figure will also increase.

The increase in the electricity market competition would not be in volume of electricity produced but in the value. This would be brought about by the conversion of release water from prices as low as \$11 MWH to prices beyond \$60 MWH plus benefits received from the timing of release on the risk management products.

Droughts occur during extreme weather conditions. The temperature variations can be large. Peak electricity consumption is likely to increase during a drought. The electricity price that could be obtained on the NEM is likely to be higher than in normal when the water is released through the turbines.

SHL would be able to negotiate the release timing of water with LRU and its customers in the timing release on the futures water market that would be established and operated by LRU to facilitate this trade.

This futures market would be a physical market and would facilitate the establishment of the price that either the electricity market or the water use market could afford in open competition and not be constrained by the monopolistic operation of the vacant facilities at SHL. The two markets would converge for the benefit of water users and electricity users and facilitate productivity growth.

The transport services within the Snowy Scheme are capable of transferring the average annual amount of water that the Scheme is called on to supply each year in only 15% of that year, out of the Scheme and into the State Water system.

Restrictions apply in some locations throughout the State Water system and the Vic and SA systems for volume of water. LRU contends that the current temporary transfer water system between water users intrastate and interstate will apply to water stored and released from the SHL storages. The volume of water released will be the same as LRU does not produce water, only the time of release will be different. LRU wants to put in place a facility to utilize the water efficiently and effectively for the national benefit. LRU believes its customers must be allowed to conduct the transfer of its water throughout the MDB without any other hindrance other than the restrictions that currently apply in the temporary transfer market being capacity and environmental constraints.

**19. WHETHER ACCESS WOULD PROMOTE COMPETITION IN ANY OTHER DEPENDANT MARKETS. IF SO, EXPLAIN THE NATURE OF THESE MARKETS AND THE PROSPECT FOR COMPETITION.**

If the firm were to “give less and charge more” would there be, to put the matter colloquially, much of a reaction? (Re Queensland Co-operative Milling Association Ltd (1976) 25 FLR 169 at 190).

LRU believes there would be strong reaction in both the Snowy Borrow market and all sections of the electricity market if SHL (the firm) attempted to charge more for less. LRU believes that SHL is already at the outer boundaries of the market in price and that its customers would refuse to continue purchasing SHL products and seek alternatives. SHL have priced them out of the Snowy Borrow market in the past and will continue to do so in the future unless LRU gain access to the storage and create competition to SHL.

The prospects for competition in the electricity and risk management markets are directly related to the water available to produce these commodities although risk management products can be created without the water in the storages. This practice greatly increases the risk and the potential profit and LRU is unable to ascertain whether SHL operates in this manner or not.

If the production of these commodities is directly related to the water in the storages, LRU believes that the futures market for water release timing and storage would be the nearest the nation is going to get to open competition when water users and electricity consumers compete for the use of this most precious resource.

The product dimensions that would be accommodated in this futures market that are not catered for now are the carryover of water from one year to the next with the only loss being accurate evaporation not a notional amount. This product will come from three states and will be transported through the current temporary transfer system operated within the MDB, both to and from the SHL storages.

The functional dimension will include the interface that will be the exchange of water in the futures market conducted by LRU. This market will facilitate water to be transferred in and out of Snowy storages at different times for the consumption of water by the vast array of consumers that make up the water users within the MDB. The ability of electricity consumers to benefit from the increased amounts of water to generate peak electricity instead of base load electricity will increase the field of competition in this market. This will be of great benefit to consumers in NSW as a shortfall in peak electricity is expected in the near to medium term. There are new developments for electricity production on the horizon as well as nuclear power suppliers that may or may not eventuate. Where these will fit into the competing demands for both peak and base load electricity generation in the future is a very difficult question. Substitution of electricity produced from thermal, wind and hydro occur all the time on the NEM currently. SHL was once the only generation source that could offer Black Start capabilities, now there are many combined sources within the NEM that can offer this service.

The areas supplied by the new carryover product will include NSW, Vic and SA and may also include the ACT when that state will require water. The timing of release of water can be substituted by rain, if the water user is lucky. The water can remain in storage for the benefit of the allocation holder or may be transferred through the futures market to another water user who lacks luck with the rain in another state or held for a foreseeable shortfall in water supply or just for insurance. The electricity industry may require water to be stored indefinitely for risk management concerns.

## **20. INCENTIVES AND OPPURTUNITIES THAT EXIST FOR SNOWY HYDRO AND STATE WATER TO EXERCISE MARKET POWER IN DEPENDANT MARKETS.**

LRU believes there are opportunities and have applied to the NCC to obtain access to make use of them. What SHL and State Water do is typical of a monopoly and that is to take every advantage possible and charge the maximum price. These institutions are owned by the states of NSW, Vic and the Federal Government and profits and diverted to these governments. The original debt of approximately \$1 billion dollars has only been reduced to \$870 million dollars during the last 30 years of operation.

There has been no vast amount of money spent on the Snowy Scheme and its running expenses are minimal compared to thermal generation. SHL make use of its ability to pump water back up into the storages at Talbingo and Jindabyne Dams.

## **21. ARE THERE ALTERNATIVE FACILITIES THAT PROVIDE THE WATER STORAGE AND TRANSPORT SERVICES?**

SHL contend that LRU could use the alligator weed infested Barren Box Swamp to store water for the purposes outlined in its submissions to the NCC. This is unrealistic.

The evaporation rate and the fact that you cannot transfer water anywhere other than to a few water users within the Swamp region makes it absolutely useless in terms of carrying over 800,000 megalitres of water that could be transferred into three states. The Barren Box Swamp development is proposed to capture water rejected by irrigators in the Murrumbidgee irrigation area because of rainfall events during the water year, not storing water for up to 12 months or more. SHL outlined two proposals for alternative facilities in its Briefing Paper to the NCC ON 24/02/05. LRU believes these two proposals are totally inadequate toward enhancing the effective and efficient use of water across three states. LRU has requested 800 gegalitres of storage capacity out of a total of 7000 gegalitres of capacity, in the Snowy Scheme.

This Scheme may not reach anywhere near full capacity again in the next 30 years with the combined effects of global warming and the reduced runoff due to the fire induced, new growth vegetation in the catchment. Any alternative to storing water in SHL storages by LRU is going to cost vast amounts of money, have much higher evaporation, be unable to convert base load electricity to peak or transfer water between the Murray and Murrumbidgee systems, if at all.

These alternatives are esoteric and put up to defend the monopoly that SHL has on its storages. LRU's 800 gegalitres would easily fit into the vacant storage capacity of SHL, there is no alternative.

There are no other transportation services that can achieve what the Murray and Murrumbidgee systems can do. Duplicating transportation facilities adjacent to these rivers would be cost prohibitive on construction and land purchases. The damage to the environment that would take place with construction would also be prohibited by the various state and federal institutions charged with protecting the environment.

The Murray and Murrumbidgee River systems are used under the current temporary trading rules and LRU believe that its customers will continue to use these systems under the existing rules. It is most important that water can be swapped from the Murray to the Murrumbidgee systems to maintain maximum flexibility in the water trade which is in line with COAG and the national interest.

**22. ARE THERE OTHER MECHANISMS, SUCH AS WATER DEALING, SWAPS AND OTHER FINANCIAL INSTRUMENTS THAT AFFECT THE ABILITY OR INCENTIVE FOR SNOWY HYDRO AND STATE WATER TO USE MARKET POWER TO AFFECT COMPETITION IN DEPENDENT MARKETS?**

SHL's three owners, being NSW, Vic and the Commonwealth Governments all signed up to be bound by the national competition policy. The underlying theme to this policy is about achieving the maximum benefit for the nation from our resources and infrastructure.

The States accept national competition payments from the Commonwealth Government if they comply with the policies. These payments have been worth many billions of dollars to the States since they began. This money is generated by the efficiencies achieved within the Australian economy and makes us more competitive on world markets. The benefits to the nation have been enormous and anything that impedes national competition policy should be removed.

Competition will be increased in the water trading market, agricultural production and its vast array of markets and the production of peak electricity. These are the dependent markets in which access by LRU to SHL storages will promote competition.

### **23. REGULATORY MATTERS THAT WILL PREVENT THE GRANTING OF ACCESS FROM INCREASING COMPETITION IN DEPENDENT MARKETS?**

The Scheme holds rights to the timing of water releases. 4.4.1. of the SMHEA-EIS states that "Storage and timing of release rights are a critical component of the Scheme's capacity to act commercially as a renewable energy generator within the national electricity market. These rights also allow the Scheme to enter into commercial arrangements with irrigators or other water entitlement holders over timing and availability of water supplies... consistent with the Council of Australian Governments water reform agenda". LRU believe that the temporary water trade will facilitate the storage and transport of carryover water, into and out of, the Scheme.

Water released from SHL storages flow into the Burrinjuck, Blowering or Hume dams. The water sharing plans of the Murrumbidgee and Murray regulated rivers start at the upper limits of their respective dams. Temporary trades of water are recognized by the NSW, Vic & SA governments in their water sharing plans and the COAG stipulate that water must be allowed to move to where it will create the most value.

Water sharing plans must also allow maximum flexibility in water trade. The NSW Water Management Act 2000 will allow the establishment of water trading markets that value the access licences to encourage water use efficiencies.

LRU believe that its access to the SHL storages and the futures trading in water and water releases, will mend the dislocation that exists in the temporary water market currently, from water year to water year.

Storing water for use at the optimum time for electricity generation, the environment and agriculture is a basic concept and happens now. LRU believe that no regulations prevent SHL from trading in release timing of water and will not prevent LRU from trading in timing release if access is granted, either.

Variations in timing of release must be sort from the MBDC. This occurs when the Snowy Borrow is released and also when the Snowy Borrow is repaid and the water is

returned to the Above Target class in Snowy storages. The relevant State Minister's consent for transport and storage will also be required if the current temporary transfer forms and carryover documentation is insufficient.

Competition in dependent and interdependent markets will increase, particularly with the advent of the futures water market that will enable trade in water used for timing release for energy and agriculture, which cover a very broad section of the Australian economy.

#### **24. WHETHER ACCESS WOULD AFFECT PROPERTY RIGHTS TO WATER?**

Property rights to water would be increased to the allocation holders, with LRU's access. The current system of allocation socializes the savings that a water user makes during the allocation year as unused water is spread across all the allocation holders the following year. LRU will give the allocation holder all the water that they were allocated in the allocation year, less evaporation, and they will be able to use it when they want to and not when the State says they have to use it by. This is fundamental, water that is allocated under the allocation system as a property right should not then be reduced because the allocation holder is restricted by time for its usage.

LRU believes this is a hangover from the government's drive to increase water usage in the 60's and 70's. Also water companies derive much of their income from the volume of water usage. Water companies have the loudest voices and their representatives sit on various boards and federated bodies charged with regulating water usage. The industry has gone along with this method of allocation because there has been no alternative. LRU now wants to offer water users a method to maximize their allocation, both in volume and productive use. This is an increase in property right value as the owner keeps what they were allocated.

Under the current system of carryover in NSW, the water that is carried over is deducted off the next year's allocation. The allocation holder pays for the privilege of owning the allocation every year whether the allocation allotted to the holder is 5% or 100%. The allocation holder is then denied the use of this vital commodity if it is not used within the water year. This is obviously not conducive to efficient and effective use of water.

The notion of property right infers that the allocation holder has full rights to the water allocation, but the rights to the water that is actually allocated comes under a large number of rules and regulations specifically designed to reduce the users ability to use it.

LRU will allow water that is allocated to the allocation holder in the allocation year to be utilized by the allocation holder, at their discretion over time, for the most effective and efficient use of water.

All allocation holders are now acutely aware of the value of their water allocations (water right). It is inevitable that full usage of all allocated water will happen in the system. LRU will facilitate a store for water for the prudent users of water to use in future dry periods, as the current system of water usage is more about distributing water in a good years than storing for a dry year where it will be much more beneficial.

The notion that sales water in Victoria will be reduced by carryover is a myopic view. The sales water is allocated on the basis of water in the dams. The larger users of sales water take advantage of the inability of the smaller users to extract their sales entitlements. These larger users have not complained about the restrictive temporary trading rules in Victoria. These larger buyers of sales water have captive sellers in the sales pool until the end of the water year.

The price for sales water got down to \$25 megalitre in late May 05, during the worst drought in 100 years. This is not conducive to water being used effectively and efficiently and disadvantages the property rights of the allocation holders.

If property rights are about the rights of the individual water allocation holders, then LRU will enhance them and the water user will receive the water that is allocated to them. The environmental water is allocated to the environment at the same time and rate as the general and high allocations, which is set by the water stored in the catchment .The State, reallocates unused allocation water across all the allocations. This is taking away property that belonged to one allocation holder and giving it to others. This does not happen to environmental water, as it must be used for the environment unless it is sold to water users. Environmental water has carryover priority. There will be a benefit to the environmental flows when SHL storages spill. This extractive use water will then become unavailable for extraction and benefit the environment all the way down to the Murray mouth.

**25. ARE THERE ANY REASONS WHY THE SNOWY HYDRO FACILITIES SHOULD NOT BE CONSIDERED TO BE OF NATIONAL SIGNIFICANCE IN SATISFACTION OF CRITERION(c)?**

The Snowy Scheme is one of the marvels of the modern world, based on its size and complexity. The consumption of water and electricity across three States and a Territory from this icon are of major importance to constitutional trade and commerce and underpins a large sector of the national economy.

**26. IS THE SNOWY HYDRO FACILITY OF BLOWERING POWER STATION AN INTEGRAL PART OF THE SNOWY SCHEME?**

Yes

**27. ARE THERE ANY REASONS WHY THE BLOWERING POWER STATION SHOULD NOT BE CONSIDERED TO BE OF NATIONAL SIGNIFICANCE IN SATISFACTION OF CRITERION (c)?**

Blowering Dam is operated in conjunction with the Snowy Hydro Scheme .Any large hydro electricity generator is of national significance. Blowering power station is of national significance.

**28. ARE THERE ANY REASONS WHY THE STATE WATER FACILITY OF BLOWERING DAM SHOULD NOT BE CONSIDERED TO BE OF NATIONAL SIGNIFICANCE IN SATISFACTION OF CRITERION (c)?**

The Blowering Dam facility is integral to the efficient and effective use of water and the production of electricity and related risk products by Snowy Hydro. Snowy Hydro leases up to 190,000 megalitres of airspace in this dam to enable it to operate properly. State Water has rights to 190,000 megalitres of storage in Snowy Hydro storages to compensate it for this loss of storage. There are no reasons why Blowering Dam should not be considered to be of national significance.

**29. WHAT IS THE NATURE OF THE HEALTH AND SAFETY REGULATORY REGIME WITHIN WHICH:**

**a. SNOWY HYDRO PROVIDES ENERGY GENERATION AND ANCILLARY SERVICES AND WATER COLLECTION, STORAGE AND TRANSPORTATION SERVICES? TO WHAT EXTENT WOULD A PARTY SEEKING ACCESS TO THE WATER STORAGE AND TRANSPORT SERVICE BE SUBJECT TO SUCH A REGIME?**

LRU believes that SHL have, and do, comply with all of the OH&S requirements throughout its operation. A party seeking access to the water storage and transportation services would also have to comply with these regulations.

**b. STATE WATER PROVIDES A WATER STORAGE AND TRANSPORT SERVICE? TO WHAT EXTENT WOULD A PARTY SEEKING ACCESS TO ITS WATER STORAGE AND TRANSPORT SERVICE BE SUBJECT TO SUCH A REGIME?**

LRU would be subject to all of these OH&S regime regulations.

**30. HOW MUCH AIRSPACE IN THE SNOWY HYDRO STORAGE FACILITIES NEEDS TO BE RESERVED TO PROVIDE APPROPRIATE SAFETY MARGINS?**

The Snowy Hydro storage facilities are one of the engineering marvels of the world. The design of these storages and the spillways that are connected to them, are world class and regular Maintenance is applied to these structures.

Spills may happen from time to time. Spills occurred in 1974, 1975 and 1992. These spill events have the same volume of water over time in the rivers and streams as occurred before the construction of the Scheme. Snowy Hydro can and has the ability to minimize any likelihood of a spill as it would reduce the amount of electricity that

SHL can produce. Any electricity SHL can produce means less greenhouse gas production from thermal generation.

The value of electricity, the introduction of the NEM, corporatisation of SHL and greenhouse gas emissions enhances the value of the water in store. These factors combined with the global warming and fire damage in the SHL catchments all greatly reduce the chance of a spill event or any damage from the spill. Computer modeling and communication have enhanced SHL's management of the Scheme since its completion.

Safety margins in this instance relate to human safety. Access to the SHL storages should not reduce safety margins at all if all OH&S protocols are followed by SHL who will remain the operator of the storage and transport facilities. The only difference will be that more water may be in the storages from time to time. LRU will request that water be retained or released and SHL may offer to purchase release timing rights of this water from LRU's clients through its futures market. LRU does not believe any additional risk will be incurred because of access.

The storing of water by LRU's clients may well be most beneficial in the case of a worsening drought for water supply or SHL running out of its "Above Target" water for the production of electricity. This is especially the situation in NSW where peak electricity production is expected to be insufficient in the short to medium term. The disruption to human safety in either of these instances will increase over the duration of the event and LRU believes that the additional water stored will be of greater benefit to human safety than is currently the case without access.

**31. HOW MUCH AIRSPACE IN BLOWERING DAM NEEDS TO BE RESERVED TO PROVIDE APPROPRIATE SAFETY MARGINS? COULD ACCESS TO THIS WATER STORAGE AND TRANSPORT SERVICE FACILITY BE PROVIDED WITHOUT ADVERSLEY AFFECTING SAFETY?**

There will be no alteration to the operation of Blowering Dam. Access will not create more water; the same amount of water will pass through the Dam as before. Environmental constraints and OH&S regulations will still apply.

**32. IS THERE ANY REASON WHY HEALTH AND SAFETY MATTERS CANNOT BE DEALT WITH THROUGH APPROPRIATE TERMS AND CONDITIONS OF ACCESS TO EACH OF THE SERVICES SO AS TO SATISFY CRITERION (d)?**

No reason

**33. TO WHAT EXTENT (IF ANY ) DOES THE REGULATORY REGIME , INCLUDING THE WATER ALLOCATION MECHANISMS, THE LICENCING REGIME AND THE STATUTORY INSTRUMENTS**

**CONFERRING RIGHTS AND OBLIGATIONS ON SNOWY HYDRO AND STATE WATER PROVIDE AN ENFORCEABLE RIGHT OF ACCESS TO:**

- a. THE WATER STORAGE AND TRANSPORT SERVICE OF SNOWY HYDRO**
- b. THE WATER STORAGE AND TRANSPORT SERVICE OF STATE WATER**
- c. THE WATER IN THE SNOWY SCHEME**

LRU is not aware that there is currently any regulatory regime or policy that provides an enforceable right of access in relation to any of the above but nor is there a regulatory regime that excludes access.

**34. WOULD COMPETITION IN THE WATER LENDING AND TRADING MARKET OR ANY OTHER DEPENDANT MARKET RESULTING FROM THIRD PARTY ACCESS (NOT JUST THE SPECIFIC LAKES R US BUSINESS PROPOSAL) TO WATER STORAGE AND TRANSPORT SERVICES:**

- a. DELIVER BENEFITICIAL EFFICIENCY, RESOURCE USE AND/OR ENVIRONMENTAL OUTCOMES? WHAT ARE THE LIKELY BENEFITS AND HOW WOULD THOSE BENEFITS ARISE?**

To highlight the inadequacies of the current water trading system, sales water sold for \$25 a megalitre in late May'05 in the Goulburn-Murray system at the end of the season. At the same time water was making \$94 per megalitre in Murray Irrigation on the NSW side.

If water is valued at \$25 a megalitre and the owner has no ability to store this water, they will use it on pastures or fields, late in the season, to derive some benefit no matter how small to try and generate some return on their valuable allocation capital. If they don't use this allocated water they will lose any chance of a profit from this allocated water.

Carryover in the Murray Irrigation system has made the water worth \$94 a megalitre (24<sup>th</sup> May '05), as the allocation holders can knowingly use this water for much greater benefits in the following year.

The value of the water carried over in NSW would be higher if State Water didn't take out a 5% evaporation factor at the commencement of the new water year. LRU regards this as a tax on efficiency and is against the COAG principles and

not in the national interest as it does not relate to the correct amount of evaporation at all.

The major problem with the NSW carryover is that the amount carried over is deducted off the owner's allocation in the following water year.

LRU believes that socializing the savings of prudent water users sends the wrong signal to water users entirely in NSW and LRU will remedy this if given access to the SHL storages. Even with these two major drawbacks to the effective and efficient use of water, the value of water in NSW was over 300% higher than in Vic at the close of the season and it was very dry in both areas. LRU points out that even with this NSW draconian system of carryover, it highlights immense benefits to the efficient and effective use of water.

The allocation of water in the allocation year is based on the percentage of water in store at the time of announcement. Often NSW general security holders are confronted with a nil allocation at the commencement of the new water year.

The environmental allocation is calculated at this time and has precedence over general security allocations. Some sections of the water industry believe that carryover will take water off the environment. This is not the case. The entire extractive rights in the MBD come under the "cap" and no extra water above the "Cap" can be extracted under this policy, policed by the MDBC. The allocation holders have been given property rights for their allocations and any constraint on their utilization is an invasion of these property rights. LRU contends that unused water must be stored for the best utilization and benefit.

The notion that unused allocation water belongs to the environment is wrong. If the system relies on the fact that allocations won't be used, then the day of reckoning is not far away. The COAG decree that water must flow to the most productive use has brought about a huge shift in efficiency and regular use. Allocations under the "CAP" are finite and allocation holders will shortly utilize all of the allocated water if the states honor their promise to the COAG agreement to allow water to go where it is the most productive.

The practice of limiting the temporary transfer of water as early as January in some irrigation districts is a major constraint on the efficient use of this finite resource and must be addressed. It costs the nation dearly in lost productivity. If this practice is used as a method to cover up the over allocation of water in the system, then the water users would benefit by being informed sooner rather later as they are living in a false hope of earning a living using water to produce an income.

The LRU proposal does not insist that high security allocation holders must be able to temporarily transfer water to make its trading system work. If high security allocation holders were allowed to trade throughout the water year it

would increase the pool of water available for trade and facilitate the movement of water to where it is the most productive. High security temporary trades are a Government problem and not an impediment to LRU's access declaration.

Some water industry commentators argue that there is not enough water going out the Murray Mouth now and to store water will reduce this meager amount.

Approximately 100 gegalitres flowed out the Murray Mouth over the last 3 years. Some people argue that SA needs 4000 gegalitres a year to make good its environment instead of its 1850 gegalitres that is allocated to this state every year since 1969, at the high security rate. Some other industry commentators wonder what happens to the 1100 gegalitres that are left after the SA water users have extracted the 750 gegalitres that are allocated to them as high security water considering that only 30 gegalitres, on average, flows out the Mouth each year.

These same commentators struggle with the environmental considerations of The Choke. The very short distance of the river environment that would be effected by reducing the restriction over the hundreds of kilometers of red gums along the Murray River in NSW and SA that are suffering because the river level cannot be raised due to the reduced flow. They believe that if the effects of The Choke were removed or reduced, water would be transported to SA much faster and the debilitating effects of evaporation would be greatly reduced.(The Choke in the Murray River is limited to just 8.5 gegalitres a day at Barmah). Nothing has been done since the 1980's to The Choke, physically when some willow trees and a few snags were removed which improved flow by 1 gegalitre a day.

Water is currently stored in the shallow, Lake Victoria for 6 or 8 months before it is required. With some modifications to the Choke, storing water with LRU in SHL storages on and, for the benefit of the SA government, who do not have access to a deep cold and vast storage facility could greatly enhance the effective use of water in that state.

SA water users and the State would have greater control of the water allocated to it and be able to look after their own affairs, particularly salinity levels and make the Murray Mouth run more often.

The volume of water that would be used more effectively and efficiently would be increased dramatically if access was granted to SHL storages. LRU's proposed Futures Market which will enable the value of timing of release of the water to be traded by the water owner to the electricity industry will change the water using habits of water users. If a water user stores water with LRU and plans to use it in one or two year's time, the electricity industry might negotiate a price to use this water for electricity production or for risk insurance purposes.

Say this price is \$98 per megalitre for the release timing rights to this water for up to 2 years. (This was the price SHL charged water users in Murray Irrigation in

2004-5 for the Snowy Borrow). The water users may receive the water any time over the next 2 years, plus a payment of \$98 per megalitre.

The water user may sell this newly released water on the water exchange operated by LRU or through other water brokers. Many water users would want to operate in this way so the price charged for the electricity products should reduce. Over time these electricity products will become more valuable and the price paid to the water storers in the SHL storages who participate in the LRU Futures market will increase. This will set the proper commercial value of water both in water release timing and water user value. The electricity and water markets are not linked now and should be if the most productive use of this resource is to be realized. (SHL releases water to generate electricity for less than \$12 MWh) This futures market comes at no cost to the governments and fall under the jurisdiction of the State and Federal laws of trade commerce and disclosure. This Futures Market proposed by LRU is based on water that is actually in store as opposed to water that may or may not accumulate over time in a dam somewhere. The water traded on this exchange will physically be in SHL storages. This gives certainty to the market and will increase the value of the water in this trade.

SHL state in their briefing paper that the storing water by LRU in SHL storages would disrupt the electricity market and the derivative contracts in particular. SHL also maintains that the use of the vacant water storage facilities by LRU would also have an impact on other participants in the NEM. Water is being released at less than \$12 MWh which at best equates to \$22.80 a megalitre for the release timing. This is a gross price and the cost of production must be subtracted from this price.

It is difficult to understand that if some water users ask SHL, not to release water until a more opportune time or price can be obtained that is higher than \$18 MWh, and then both the electricity market, particularly the risk management segment, and the water users will benefit. Water is the method by which SHL harnesses gravity, which is the source of the energy. This amount of water is limited and may be much reduced by the effects of global warming and recent fires. Water users, through LRU's Futures Market, will give SHL an opportunity to be able to negotiate the purchase of release timing of water.

This will be a slow process as few water users will want to store water in a drought and the water release timing will remain the same as it has for years. When the rains come and storage increases SHL will be able to enter the market and secure the release timing rights to much more water than they have ever had before. Currently SHL has to comply with minimum release requirements, all LRU asks is that SHL hold some water back for future release. The owners of the water can deal with SHL through the future release market, if the price is right, or continue to store in the hope of a better price.

Alternatively the owner can use this water at a more opportune time or sell the water on the temporary trade market. Cornering the water market with this system

would be fraught with risk as a large rain event could cause a spill and the water would be lost.

Also there are many more sellers than buyers and the price doesn't have to go much above \$80 megalitre to price a large percentage of users out of the market. The last alleged water baron recently went bankrupt and nobody wants that to happen to them.

**b. IMPOSE EFFICIENCY COSTS OR CAUSE ENVIRONMENTAL DAMAGE? WHAT ARE THE LIKELY COSTS AND HOW WOULD THOSE COSTS ARISE?**

LRU contends that there will be large efficiency gains in both the electricity and agricultural sectors of the Australian economy as a result of benefits derived from the timely use of water. The volume of water transported and stored with access will be the same as without access. The environmental constraints that apply to the water within the MDB will be applied with the declaration. The environment will be enhanced with the improved efficiency of water use. Irrigators will not be inclined to water pastures and fields late in the season in the knowledge that they can store this water for use at a more opportune time. This will reduce runoff pollution into rivers and streams from the farms.

There will be little, if any, environmental damage and a huge boost to the efficient use of water under access declaration with LRU.

**35. WHAT AMENDMENTS TO THE CURRENT REGULATORY REGIME WOULD BE NEEDED IF THE WATER STORAGE AND TRANSPORT SERVICES WERE DECLARED AND WHAT WOULD BE THE LIKELY COSTS OF SUCH AMENDMENTS?**

SHL have at their discretion the ability to enter into trades in the security of supply services associated with the timing of releases from the Scheme, provided it meets its assured annual release obligations to irrigators. (9.3 SMHEA- EIS). All LRU requires are that those obligations to irrigators be adhered to and that they be varied from time to time for their mutual benefit. The irrigators do not require more water than they are entitled to; they just want to trade in the timing of release.

The Snowy Water Licence requires SHL to release water for use by irrigators downstream of the Scheme.

(SHL Briefing paper to the NCC 1.7(c) LRU believes the regulatory regime states that trade in release timing of water within the SHL storages can be entered into. MDBC approval must be obtained to vary the timing of release. At 3.6 in the briefing paper, SHL alluded to the MBD Agreement and the Snowy Water Licence allow the trade in water release timing. State Ministerial consent may also be required to store and transport water from the Snowy storages to the water users.

The water that LRU wants to store in SHL storages does not need to be pumped into the storages at all and no transportation is required either as the water is already there. The Snowy Borrow water is returned to Snowy storages by reducing the amount of water released. All LRU is asking is that the water be released, some time in the future, for the maximum benefit of the water users in three states. The Figure 3.5 on page 32 of SMHEA -EIS clearly shows the relationship.

The Murrumbidgee irrigation area has benefited greatly from trades in water release timing over recent years. LRU cannot find out what these deals were worth or the benefits that went to the three sections of these deals being State Water, SHL and the water user groups in the Murrumbidgee irrigation area.

These deals are confidential and LRU has been unable to obtain much information other than they have taken place and there were benefits to the parties concerned. This instance and the Snowy Borrow are precedents that the regulations actually allow for the trade in water release timing as they stand and no amendments are required.

**36. WHETHER THERE ARE ANY OTHER REASONS WHY DECLARATION OF EACH OF THE WATER STORAGE AND TRANSPORT SERVICES MAY BE CONTRARY TO THE PUBLIC INTEREST?**

These services would normally store and transport the same amount of water from the catchments to the water users. LRU's access will be altering the time of use of this precious resource for the benefit of the electricity, environment and agricultural sectors of the nation. Not granting LRU access to these storage and transport services would be contrary to the public interest. Productivity growth will be enhanced by this declaration by the efficient and effective use of water at very little cost of implementation.

**37. WHAT IS THE APPROPRIATE DURATION FOR ANY DECLARATION OF THE WATER STORAGE AND TRANSPORT SERVICES AND WHY?**

The declaration of the water storage and transport services of SHL will be of great benefit to the water users and the electricity industry. The longer the duration the greater the certainty to its users. The futures trading in both water and water release timing will require time for users to fully understand the concept and feel confident about using it. This may take up to three years subject to rain falling in SHL catchments so that there is water to release and trade.

LRU requested 30 years as it felt that period of time would give certainty to this evolving market. LRU cannot see any reason to make it less as it strongly believes that only good will come of it. It would be similar to giving a time limit on the temporary trading of water, or saying that temporary trading might cease in 5 years.

It sends the wrong message entirely and temporary trade in water has been enormously beneficial to water users and the nation and many water users rely on it to maximize their production. 30 years is the appropriate time for the declaration.

**38. SHOULD THE DURATION FOR ANY DECLARATION OF THE WATER STORAGE AND TRANSPORT SERVICE OF SNOWY HYDRO DIFFER FROM DURATION FOR ANY DECLARATION OF WATER STORAGE AND TRANSPORT SERVICE OF STATE WATER? IF SO, WHY?**

No, the two systems must be operated together. It is pointless having access to Snowy Hydro if the water cannot be used efficiently and effectively through the State Water system.

LRU's proposal will be very beneficial to water users. It would be unproductive if one or both of these parties thwarted this advance in productivity growth because the two duration's did not coincide and were not for the 30 years.

**39. ARE THERE ANY REASONABLY FORESEEABLE ISSUES THAT COULD MATERIALLY AFFECT THE COUNCIL'S ASSESSMENT OF THE DURATION OF ANY DECLARATION IN LINE WITH THE LAKES R US APPLICATION? IF SO WHEN AND HOW ARE THE ISSUES LIKELY TO ARISE?**

Once declaration is obtained, it will be highly unlikely to ever revert to a monopoly again, when the benefits of the effective and efficient use of water are plain for all to see. Australia cannot afford to miss any opportunity to increase productivity. In three or four years from now, after the LRU Futures Water Release Market has been operating for a significant time and everyone is familiar with it, there will be no turning back. The temporary water trade has had a profound effect on the efficient and effective use of water and this declaration will be a great adjunct to it over time.

## **GLOSSARY OF ABBREVIATIONS**

SHL	Snowy Hydro Limited
LRU	Lakes R Us Pty Ltd
MDB	Murray Darling Basin
MDBC	Murray Darling Basin Commission
KNP	Kosciusko National Park
Vic	Victoria
NSW	New South Wales
COAC	Council of Australian Governments
SMHEA – EIS	Snowy Mountains Hydro Electric Authority – Environmental Impact Statement
NEM	National Electricity Market
OH & S	Occupational Health and Safety
MWH	Mega Watt Hour
CFO	Chief Financial Officer