

to meet its own needs. When there are clearly other solutions available to meet the region's water needs, destruction of aboriginal heritage sites should not be under consideration.

Key Consideration for Rejection:

Perhaps the most basic reason for rejecting a dam solution is that it is simply not a sustainable solution in the long term because it is dependent on rainfall. Since we all now know that we are trying to build resilient communities both natural and human, we need to find solutions which will not increase risk and make us hostages to the uncertainties of climate change.

The Water Services Association of Australia has pointed out in All Options on the Table, August 2020, that no water supply option on its own is likely to meet all the needs of a city or regional town: combinations of options need to be considered. With decreased flows into rivers and dams, our reliance on rainfall dependent water supply options is a risk to our water security.

The NSW Productivity Commission, in its Green Paper 2020, has also pointed to the need for water efficiency, and new sources such as purified recycled water if we are to maximise cost-efficiency and minimise future risk.

Dr Stuart Khan, Professor of Civil and Environmental Engineering from the Global Water Institute, UNSW, has pointed out (Water Research Australia: Potable Water Re-use Report 2019) that a resilient system should ensure that 30-50% of its water supply is from non-rainfall dependent sources.

In short, looking to a dam for long term water security for the region is looking in the wrong direction.

Other Available Solutions:

The Department's own Draft Regional Strategy's long list of options contains numerous other non-dam options which can clearly achieve the stated objective of maintaining and diversifying water supplies. Since these other options do not have the same suite of negative effects that the Dunoon Dam would have, they should be fully explored, and the most sustainable, cost effective solutions adopted without further consideration being given to the dam.

1. Water Efficiency and Demand Management:

Although they do have in place a regional Demand Management Plan for 2019-22, Rous County Council appear to underestimate effective demand management and

water efficiency measures in their Future Water Project 2060. This is despite the fact that such measures have been shown to be so effective in other Australian locations (e.g. Sydney Water has been able to service an additional 950,000 people through water efficiency measures: Prof Stuart White, Institute of Sustainable Future, UTS. Rous Water Supply Augmentation Proposal - Brief Review, August 2020).

There are many variants and options to be explored under water efficiency measures including water harvesting. Warrnambool within Wannon Water's supply area provides a useful example to the Northern Rivers region, where so many new housing developments are one of the key reasons for increased demand. Here a roof water harvesting scheme collects and diverts roof water from all new houses and industrial buildings within new estates located in a growth corridor. Water is then transferred via gravity into an existing untreated water storage where it is treated through the existing treatment plant to provide drinking water for the city of Warrnambool. Rous County Council has not considered implementation of such an approach despite new developments underway in many parts of the relevant shires.

Nor do they appear to have considered the interconnection options posited in the DPIE's long list, which are clearly worthy of further exploration.

2. Water Re-Use Options:

Indirect potable re-use and Direct potable re-use are both included in DPIE's long list of options. Rous County Council rapidly dismissed these apparently on the grounds that NSW does not have this option in use, although it is in use in other parts of Australia.

DPIE's Long List includes Option 6 Remove impediments to water re-use projects; Option 7 indirect potable re-use of re-cycled water; and Option 8 Direct potable re-use of re-cycled water. Clearly option 6 should be implemented immediately and Options 7 and 8 explored fully for the most practicable solutions, since they do offer sustainable solutions for building resilient communities.

There are now many studies available and many examples globally. These are documented in two of the studies already mentioned: Water Services Association of Australia All Options on the Table, August 2020, and Water Research Australia: Potable Water Re-use Report 2019. As acknowledged in DPIE's long list, community engagement and education are keys to successful implementation and the process needs to be carefully carried out over a period of approximately 10 years. While acknowledging that the Far North Coast Region, and in particular the area within Rous County Council's remit, is more environmentally aware and more committed to

building resilient and sustainable futures than perhaps most other parts of NSW, it is still the case that an active campaign needs to be undertaken, commencing as soon as possible, using the principles outlined in All Options on the Table, to ensure timely implementation.

One significant point which appears to be overlooked in the DPIE's long list is that the options for re-cycling are not limited to reverse osmosis with its production of brine and relatively high energy use. Chemical Engineers [REDACTED] and [REDACTED] in their Rous County Council Future Water Project 2060 Feedback Submission point out that new activated carbon treatment trains (Advanced Water Treatment Plant Process Trains), may well be practicable in at least some areas, and that these do not produce saline and have lower energy requirements. This approach would address some of the considerations outlined in the DPIE long list. ([REDACTED] also note that Rous consultants in considering water-re-use as an option underestimated source water; underestimated yield omitted to include Byron and Brunswick heads sewerage treatment plants as possible sources; and overestimated costs.)

Water re-use should be returned to the table as a major replacement option for a dam and more thorough exploration commenced as soon as possible.

3. Desalination Plants

The DPIE list considers both regional and decentralised options for desalination plants. These options are more acceptable for long term sustainability/resilience and environmental reasons than dams. Careful site selection is critical as noted in the report. Energy costs are a factor, but energy costs are equally a factor to be considered in dams, including the energy cost in concrete. Solar energy generated from community owned farms of the type currently in planning in the region would be the most sensible economic solution for desalination plants.

Enova Community Energy is committed to such generation options involving local shareholders to ensure money flows remain circulating in the region. As a social enterprise, Enova is also committed to ensuring that 50% of profits from retailing are also returned to the regions. A combination of County Council owned desalination plants, with community-owned solar generation and community-owned and social enterprise operated energy retailing would maximise economic benefits to the region in addition to providing a more resilient future.

Conclusion:

A new Dunoon Dam has no social licence; would irretrievably damage our precious environment, fauna and flora; and would place our future water security at risk. There are other, better options for addressing the objectives of the DPIE's Far North Coast Water Strategy, and the needs of Rous County Council to delivering regional water security. I respectfully urge you to remove it from the Long List of Options.

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Enova Community Energy Ltd

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