

Options for bringing water to Perth from the Kimberley - An Independent Review

SUMMARY OF EXPERT PANEL FINDINGS

Technical and Economic Issues

- The lowest cost option to supply water from the Kimberley to Perth by matching growth in water demand, is through transporting water in super tankers. This was \$6.70/kL, more than five times the cost of desalination.
- To be competitive with other sources available to the Water Corporation, the cost of delivering water from the Kimberley would need to be reduced by 80 per cent. This was not seen as achievable by any of the options studied even taking an optimistic view of the development of new technologies in the future.
- Incorporating a Kimberley water supply into the Water Corporation's supply scheme may be expected to at least double the average annual household water bill, from \$304 to >\$610 per yr
- Ocean transport options would consume more energy per kilolitre than the pipeline, canal or desalination plant and therefore would have the greatest greenhouse gas impact.
- Transporting water via a canal would be the most expensive and risk-prone option, in the context of providing a reliable water supply to urban consumers, and would have the greatest environmental impact.
- The pipeline option is based on proven engineering solutions. This option has higher energy requirements than a canal but is less prone to risk.
- The use of the water en-route to Perth was not economically viable for irrigated agriculture, rehabilitation of native vegetation, or town and community water supplies (the cost of water from either a pipeline or canal would be ~100 to 200 times more expensive than current prices for irrigation water).

Environmental and Social Issues

- There is limited knowledge on the hydrogeology and ecology of the Kimberley region.
- On the information available, the pipeline and canal options would require the construction of some storage in the Fitzroy valley, which could include a dam on the river and or some large off-stream storage towards the lower end of the river.
- The Indigenous Kimberley communities that would be affected did not support taking water from the region. Also, the resolution of Native Title and land acquisition could be expected to take considerable time, particularly for the pipeline and canal options.
- The ocean transport option may be expected to have the least environmental impact to the land as it proposes to source its water from the Ord River, which has an existing dam. However, it generates approximately three times as much greenhouse gases as the pipeline or canal options.
- Consultation established that the Kimberley community sought an outcome in which Kimberley water was not seen as a free or wasted resource.

Other Issues

- Renewable energy was not cost effective currently for transporting the water, other than for monitoring and valve and gate operation.
- The distances involved rank among the longest water transfers in the world.
- The proposal to incorporate the G&AWS pipeline (from Kalgoorlie) into the schemes was examined and found to be impractical.

CONCLUSION: While several methods are technically capable of delivering water from the Kimberley to Perth, the water would cost much more (at least five times) than if supplied by other available options and offers no other significant advantages to the State's development.

See the full report at:

http://portal.water.wa.gov.au/portal/page/portal/PlanningWaterFuture/Publications/KimberleyWaterSource/Content/FinalReport_000.pdf