Big hole in PM's water plan

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Market mechanisms will best solve the allocation of water and save taxpayers money, writes Paul Kerin.
Prime Minister John Howard's vision for water management correctly identifies agricultural water use as the key issue: farmers guzzle 70 per cent of Australia's water.

But despite the plan's focus and noble intent, it will flush billions of taxpayer dollars down the drain. Why? Because it fails to harness the power of markets and prices to align the interests of water users with those of society.

Governments recognised the importance of properly pricing some scarce resources years ago. Take the spectrum used for broadcasting and mobile phone transmission: as demand skyrocketed, governments recognised the value of property rights to these resources and decided to auction them. Auctions helped to efficiently allocate resources between competing demands.

But governments never allocated water efficiently. Historically, states simply gave away water licences (call them entitlements) to land owners who applied.

But if economic efficiency is our goal, does this ancient history matter? Entitlements eventually become tradeable, so doesn't the market allocate them efficiently? After all, one of economics' most famous theorems says that regardless of how property rights are initially determined, they will be efficiently allocated provided they can be freely traded between all who value those rights. The problem is that Nobel prize winner Ronald Coase's proviso does not apply to water entitlements.

Many who value water highly cannot access our water market. Households cannot buy entitlements, even though (at the margin) they value water much more highly than farmers. Irrigators often pay water usage charges of only about $45 a megalitre; households can pay $1600/ML.

As entitlements sell for about $700/ML, farmers do bear an annualised opportunity cost of about $70/ML − taking their total perceived cost to $115/ML. The discrepancy between $115/ML and the real opportunity cost ($1600−plus/ML) is huge. Transferring only one ML of water from an irrigator to a household would generate a net benefit of at least $1465.

While households can't buy entitlements from farmers, water companies could, and then resell to households. But they are monopolies. Monopolists maximise profits by constraining supply and selling high. That's why we need to introduce competition into water retailing. If retailers compete for customers, they will willingly arbitrage value differences that farmers and non−farmers place on water.

Other ridiculous impediments to trading must go. Some water bureaucracies charge "exit fees" of up to 75 per cent of the sale price of entitlements and districts often allow only a tiny percentage of entitlements to be sold.

Therefore, entitlement prices fail to reflect water's true scarcity value. Irrigators continue to utilise water in low−value ways despite the enormous opportunity cost. In 2004−05, it took 1.9ML of water to produce one tonne of rice worth $316 (gross, before all costs). But the real opportunity cost of that water is more than $3000.

Will Howard's plan help? The $3 billion earmarked for entitlement buybacks makes sense, given states' past stupidity. Not only did they give away rights for nothing, they gave away far too many.

But spending $6 billion of taxpayer money on "modernising irrigated agriculture" is silly. While the goal (saving 15 per cent of Australia's water use) is admirable, there's a much better way to achieve it: raise the average water cost that farmers pay by 35 per cent.

Empirical studies show that price drives farmers' water use: a 1 per cent price rise reduces demand by about 0.8 per cent. This is partly because it raises farmers' incentives to save water. But it also drives farmers' output choices away from water−intensive crops (such as rice and cotton) and irrigation technology investment/maintenance decisions towards water−efficient options.

As we are stuck with the entitlements albatross, raising charges to irrigators won't help achieve the 35 per cent increase, as entitlement prices (and perceived opportunity costs) would fall. But making the entitlements market more complete − granting access to all, introducing retail competition and eliminating other silly impediments − would boost entitlement prices, giving irrigators excellent incentives to improve on−farm water efficiency.

Faced with market−based prices that reflect water's scarcity value, our farmers would make their decisions consistent with society's best interests.

The market option is win−win. Farmer entitlements rise in value. Non−farmers get access to water they value highly, our national water stocks are replenished, all water restrictions are lifted − and we don't have to drink treated sewage.

Geographic area:
Australia

Classification:
Industry/Primary Industry/Irrigation
Industry/Water
Industry/Primary Industry