AUSTHINK CONSULTING

The desalination plant debate at a glance

A bCisive Diagram prepared for Professor John Langford,
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THE UNIVERSITY OF MELBOURNE | Uniwater | MONASH University

Idea
Victoria should build a desalination plant for Melbourne

1A Supporting Argument
Building a desalination plant would insure Melbourne against critical water shortages in the next decade

2A Supporting Argument
A desalination plant, if built now, would insure Victoria against critical shortages after 2012.

3A Explanation
A desal plant would take 4 yrs to build and the critical problems loom from around 4 years out.

4A Evidence
There have been three El Ninos in the past decade and another one would cut our water storage down to critical levels.

2B Supporting Argument
A desalination plant would enable Victoria to rebuild its water storages over the longer run.

3B Explanation
A single desal plant could provide up to 8% of water storage capacity per annum, which would be enough to replenish the storages over the longer run.

2C Opposing Argument
There will not be critical water shortages in the next decade.

3C Contention
The current shortages are just a drought and it will break soon, replenishing our water storages.

4B Challenge
This is uncertain and the risks of waiting too long are far too high for us to forego the insurance option.

5A Evidence
The patterns of temperature and rainfall we are now seeing suggest that our dry spell is due to climate change, not a mere cyclical drought.

1B Supporting Argument
Nothing other than a desalination plant can provide this insurance.

2D Opposing Argument
As a rainfall independent source of water, potable recycling could provide this insurance.

3D Rebuttal
Potable water recycling for Melbourne would entail health and safety problems that would take a decade to resolve.

2E Opposing Argument
New rainfall dependent water infrastructure could provide this insurance.

3E Option
New dams

4C Con
New dams would take at least a decade to build and by then it could be too late.

3F Option
A North South pipeline

4D Pro
A North South pipeline could be built within 2 years.

4E Con
Such a pipeline would provide only half the quantity of water that a desal plant would provide.

3G Option
Urban rainfall tanks

4F Con
Urban rainfall tanks would cost far more than a desal plant and depend on rain that may not come.

3H Option
Capture storm water

4G Con
It would have to be turned into potable water and this would be difficult, expensive and time -consuming.

4H Con
It could not provide the necessary quantity of water (150,000 GL) within the critical time frame of 3 to 4 years.

4I Con
It would have to be able to provide large quantities of water during an El Nino and it would not be able to do this.

1C Opposing Argument
Building a desalination plant would undermine demand management

2F Supporting Argument
Once built, a desal plant would lead the public to insist on the lifting of water restrictions.

2G Supporting Argument
If the desal plant was built, as proposed, by a PPP, there would be pressures to consume the water it produced.

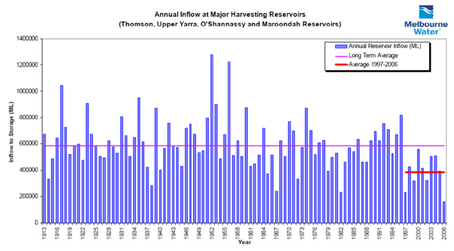
2H Rebuttal
The Victorian Gov't could combine responsible demand management with reliance on a desal plant as an insurance policy.

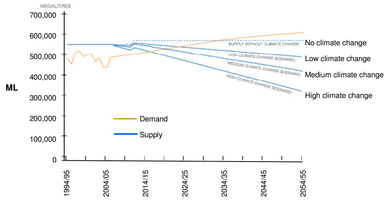
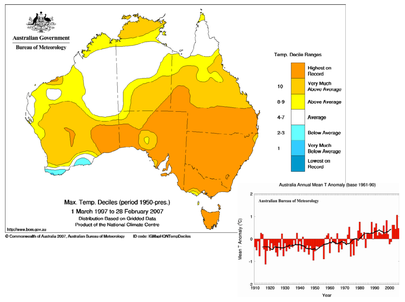
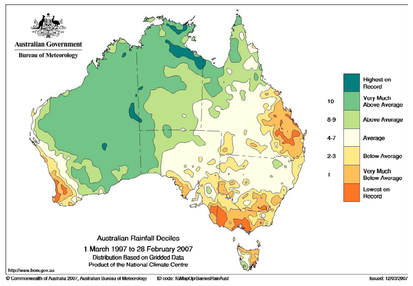
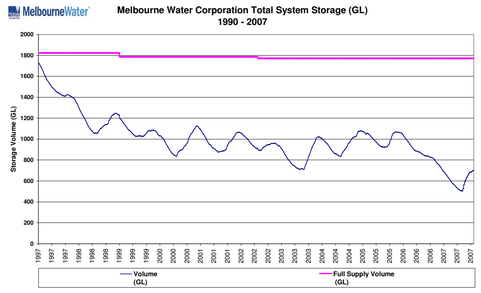
1D Opposing Argument
Building a desalination plant would have undesirable environmental side effects

2I Supporting Argument
A desal plant would pollute the surrounding environment.

2J Supporting Argument
A desal plant would undermine our efforts to reduce greenhouse gas emissions.

2K Rebuttal
The urgent need for the insurance a desal plant would provide outweighs these concerns.

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