



**ClimateMundial**

Case Studies of Climate Resilience in Urban Areas and their Funding – Adelaide Desalination Plant  
UNFCCC Standing Committee on Finance Annual Forum – Montego Bay, Jamaica, 22 June 2014

Email: [info@climatemundial.com](mailto:info@climatemundial.com)

Website: [www.climatemundial.com](http://www.climatemundial.com)

# Acknowledgements

---

Government of South Australia and the University of Adelaide



# Contents

---

- Introduction
- Adelaide Desalination Plant
- Financing the Project
- UNFCCC discussion questions

# Case Study - Adelaide



# Adelaide Water System

---

Element	Details
Population	South Australia population 1.67 million (7% of national) of which Adelaide is the capital city with a population of 1.29 million (77% of state total)
Water demand	Over 1998-2008 Adelaide metro area consumed 190GL per year in domestic, commercial, industrial and agricultural sectors. 156GL in drought year 2007-2008 with restrictions
Water Supply	Based on network of reservoirs & aquifers around metro area and augmented via connected pipeline network from Murray River providing some resilience in periods of low rainfall
Risks	Entire water supply system is vulnerable to long periods of drought affecting simultaneously the Murray Darling basin AND reservoirs in Adelaide metro area (exacerbated by the possible future impacts of climate change)

Sources: SA Water Corporation, Murray-Darling Basin Commission, Commonwealth Auditor General

---

# Affected Industries

---



Source: Adelaide Now ([www.adelaidenow.com.au](http://www.adelaidenow.com.au))

---

# Contents

---

- Introduction
- Adelaide Desalination Plant
- Financing the Project
- UNFCCC discussion questions

# Water For Good

---

Element	Details
Objective	Develop a water system for Adelaide not totally reliant on rainfall with inherent resilience in periods of sustained drought
Storm Water and Waste Water	Infrastructure for domestic, commercial and industrial and agricultural sectors to allow greater levels of storm water and waste water capture, retention, purification and re-use to offset mains water usage, rather than disposal
Water Usage	Technology and behaviour change measures in the domestic, commercial, industrial and agricultural sectors to encourage highest levels of efficiency in water usage to minimise waste
Desalination	Develop alternative sources of water supply, including desalination, to provide water to domestic, commercial and industrial and agricultural sector users in Adelaide metro area
Targets	Reduce requirement for water from rivers, reservoirs and aquifers to below half of total annual water demand

Sources: South Australian Government

---



# Storm Water

---



Source: Adelaide Now ([www.adelaidenow.com.au](http://www.adelaidenow.com.au))

# Desalination

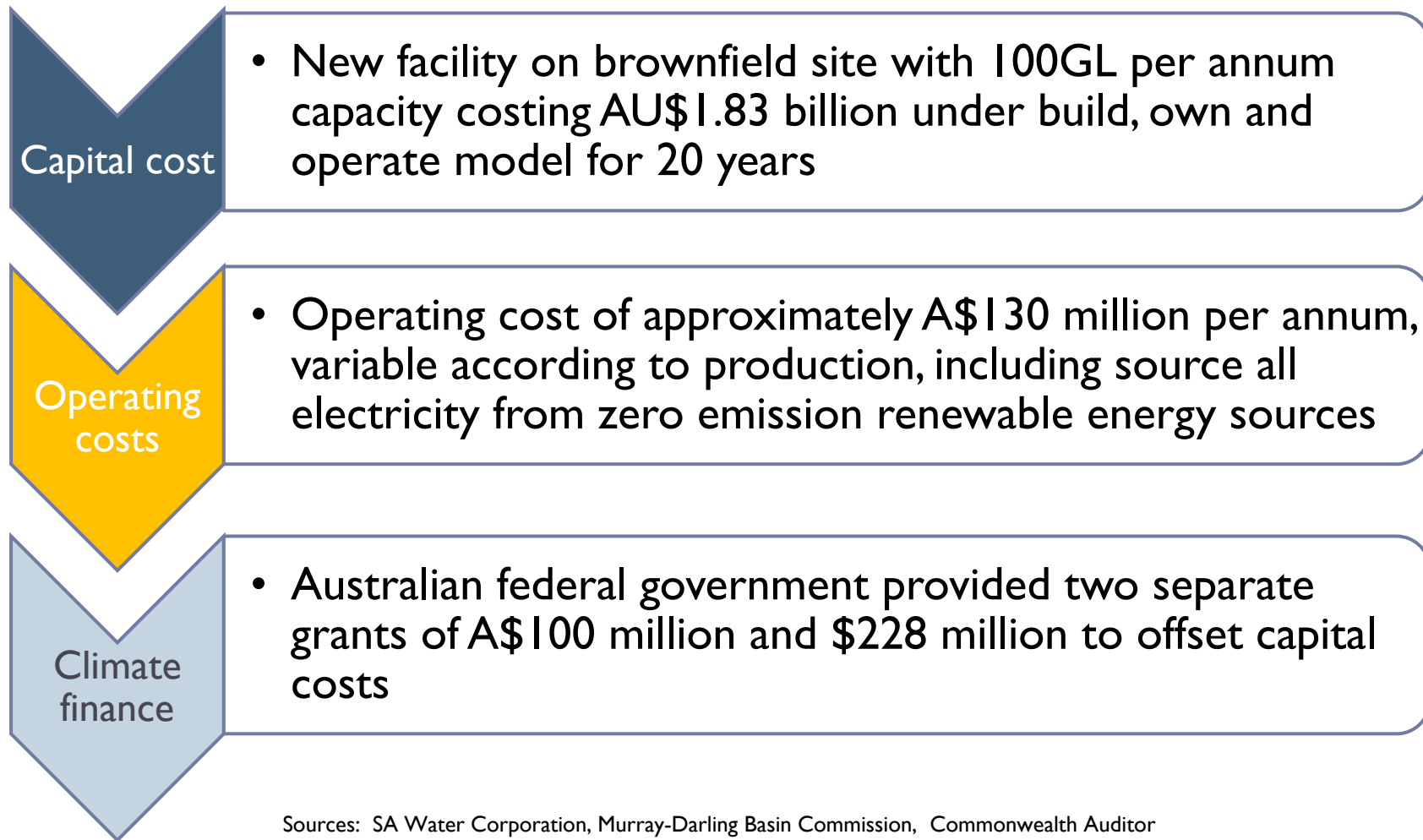
---



Source: Acciona ([www.accional.com](http://www.accional.com))

# Key Details

---



Sources: SA Water Corporation, Murray-Darling Basin Commission, Commonwealth Auditor General

# Contents

---

- Introduction
- Adelaide Desalination Plant
- Financing the Project
- UNFCCC discussion questions



# Benefit Cost Analysis

---

Scenario	B-C Ratio
Level 5 water restriction event occurs once in 45 years	0.66
Level 5 water restriction event occurs once in 230 years	0.69
Level 5 water restriction event occurs once in 22.5 years	1.54

Options including the desalination project considered:

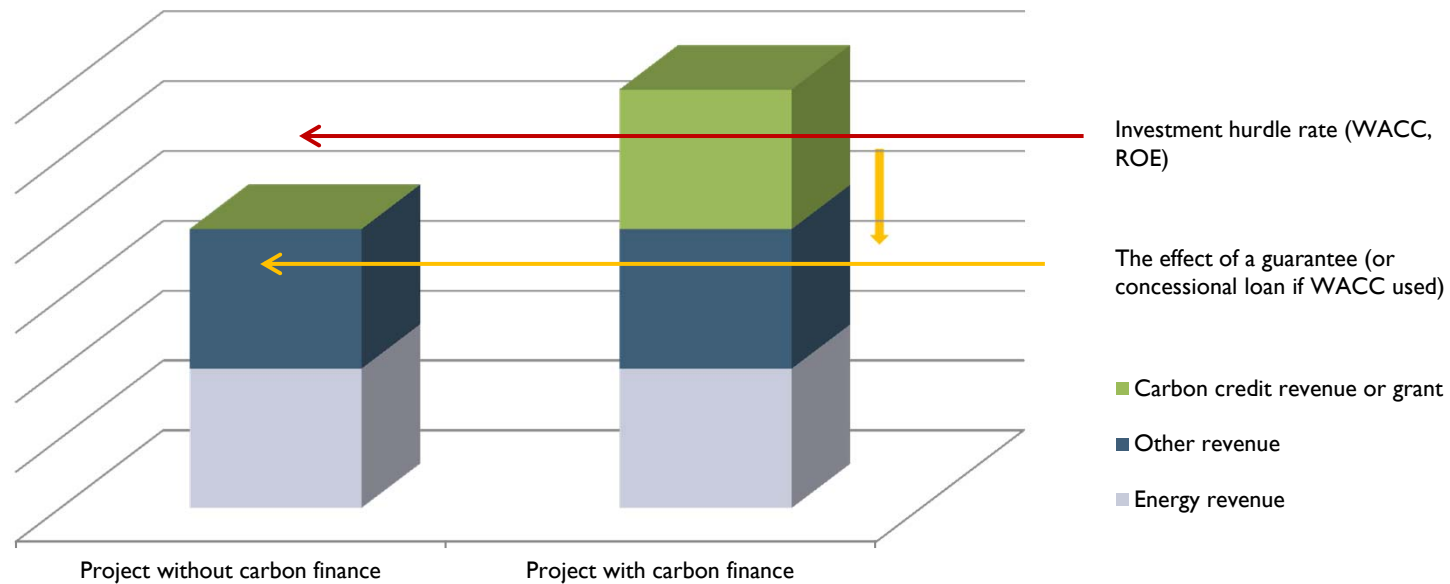
- Purchasing 105GL River Murray entitlements (approx. A\$0.20-0.30/kL)
- Desalination plant (approx. A\$1.30/kL) – see video [here](#).
- Apply more Level 5 water restrictions

Sources: SA Water Corporation, Murray-Darling Basin Commission, Commonwealth Auditor General

---

# Climate Finance

## Comparing climate finance and carbon finance in the adaptation context



The specific aim of climate finance is to use various instruments – namely concessional loans, carbon finance, grants, guarantees and tariff support - to influence project design and investment decisions.

Note: the above is for illustrative purposes only

# Contents

---

- Introduction
- Adelaide Desalination Plant
- Financing the Project
- UNFCCC discussion questions

# Discussion Questions

---

No.	Question
1	What is the nature of adaptation finance in the relevant sectors and/or municipalities?
2	How is adaptation finance in the sectors and / or municipalities linked to development finance?
3	How should resilience be included in sectoral and / or municipality-level development planning?
4	What opportunities and barriers exist in mobilization, delivery & access to adaptation finance (from perspective of both providers and recipients) for sectoral and / or municipality activities?



# Discussion Questions

---

No.	Question
5	What enabling environments are envisioned to increase funding, and private sector engagement in the future?
6	How can adaptation finance be scaled up for action at the sectoral and/or municipality-level?
7	What are the co-benefits between adaptation and mitigation and their contribution to sustainable development in the respective sectors and/or municipalities?
8	What are examples of successes and failures in ensuring that community adaptation needs are addressed?

# Disclaimer

---

This presentation has been prepared for discussion purposes only and is not an offer to sell or a solicitation to buy any financial product, nor to provide financial services or financial advice. While this presentation may make reference to various financial products no such reference should be taken to be an endorsement of such product by Climate Mundial. Climate Mundial has attempted to provide accurate and complete information obtained from reliable sources, however, Climate Mundial makes no warranties or representations, express or implied, as to whether information provided in this presentation is accurate, complete or up-to-date. The reader should therefore be fully aware of these limitations and, where further accuracy is required the reader should seek its own professional advice. Unless otherwise prohibited by law, Climate Mundial disclaims all liability for any loss or damage suffered by any person using, disclosing, relying or acting on any information supplied to it or inferred from information supplied by Climate Mundial or any of its representatives. Climate Mundial retains all present and future rights (including copyrights, trademarks, patents as well as any other intellectual property right) in relation to its own work within this presentation. You may not copy, download, publish, distribute or reproduce any of the information contained in this presentation in any form without the prior written consent of Climate Mundial. Climate Mundial makes no representation and gives no advice in respect of any financial, investment, tax, legal or accounting matters in any jurisdiction including the suitability of financial products to investors. Climate Mundial shall not, nor any of its agents or subcontractors, be liable for any direct, indirect, special, incidental, consequential, punitive, or exemplary damages, including lost profits (even if Climate Mundial is advised of the possibility thereof) arising in any way from, including but not limited to: (i) the information provided in this presentation; (ii) the modification or misuse of information in this presentation; or (iii) claims of third parties in connection with the use of this presentation. This exclusion of liability is made for the benefit of directors and employees of Climate Mundial. This presentation has been prepared without taking account of the reader's objectives, financial situation or needs. Consequently, before acting on the information in this presentation, the reader should consider the appropriateness of the information in view of its own objectives, financial situation and needs. Climate Mundial Ltd is a Private Limited Company registered under the Companies Act 2006 in England & Wales. Company number: 8073353. Climate Mundial is authorised and regulated by the Financial Conduct Authority (UK).



**ClimateMundial**

Case Studies of Climate Resilience in Urban Areas and their Funding – Adelaide Desalination Plant  
UNFCCC Standing Committee on Finance Annual Forum – Montego Bay, Jamaica, 22 June 2014

Email: [info@climatemundial.com](mailto:info@climatemundial.com)  
Website: [www.climatemundial.com](http://www.climatemundial.com)