

Title of case study	Desalination: Kurnell Project
Name of organization(s)	Veolia Water
Business sector	Energy and Utilities
Region(s) relevant to case study	<input type="checkbox"/> All regions <input type="checkbox"/> Africa and the Arab States <input checked="" type="checkbox"/> Asia and the Pacific <input type="checkbox"/> Caribbean and Central America <input type="checkbox"/> Europe <input type="checkbox"/> Least Developed Countries <input type="checkbox"/> North America <input type="checkbox"/> Polar regions <input type="checkbox"/> Small Island Developing States <input type="checkbox"/> South America
Country(s) relevant to case study	Australia
Adaptation sector(s) relevant to case study	<input type="checkbox"/> Business <input type="checkbox"/> Education and training <input type="checkbox"/> Food security, agriculture, forestry and fisheries <input type="checkbox"/> Human health <input type="checkbox"/> Oceans and coastal areas <input type="checkbox"/> Science, assessment, monitoring and early warning <input type="checkbox"/> Terrestrial ecosystems <input type="checkbox"/> Tourism <input type="checkbox"/> Transport, infrastructure and human settlements <input checked="" type="checkbox"/> Water resources <input type="checkbox"/> Other (please specify):
Adaptation activity	<p>In June 2007, as part of the New South Wales Government's initiatives for sustainable water supply, the Sydney Water Corporation has awarded a major 266,000 m³/day seawater reverse osmosis desalination plant 20-year contract to the Blue Water Joint Venture composed of Veolia Water, for the operation and maintenance, and John Holland, for the design and construction. The project's aim was to help ensure Sydney had a sustainable and secure water supply and came after growing concern over climate change as indeed, over the past 10 years, rainfall in the Sydney</p>

	<p>area has been below average and concentrated on the coast, away from the catchments of the major storage dams.</p> <p>Delivered on time and on budget, the plant, currently the largest operating desalination plant in Australia and located in Kurnell in the southern part of Sydney, has been operating since January 2010, supplying high quality treated water into the water supply network and producing up to 15% of the city's water supply. Moreover, a 67-turbine wind farm at Bungendore (New South Wales) has been purpose-built to generate enough renewable energy to offset the entire energy use of the plant, allowing therefore a neutral greenhouse impact of the facility, energy-wise.</p> <p>Since the beginning of operations, despite wide seawater temperature variations, seasonal algae and jelly fish blooms, the plant has consistently met all water production requirements. Besides, through optimization of the reverse osmosis treatment process, the facility's energy consumption has been consistently lower than the warranted design energy consumption and the chemical dosing reduced as well, allowing significant cost savings and lower environmental impacts whilst maintaining the plant performance. Finally, carefully designed diffusion of the brine return to the sea has assured a minimal impact on the marine environment.</p> <p>Overall, the facility has therefore become a critical part of the infrastructure in Sydney, together with water savings systems and recycling plants, in order to help reduce water stress in this area affected by increasing climate uncertainty.</p>
<p>Cost-benefit</p>	<p>Veolia Water was contracted to play a leading role in this project by managing the plant's design-construction and commissioning phases through its subsidiaries OTV and VWS Australia.</p>
<p style="text-align: center;">CLICK FOR MORE INFO</p> <p style="text-align: center;"></p>	



Sydney Desalination Plant
Source: Veolia Water