



## CASE STUDY >

# SYDNEY DESALINATION PLANT ME&I DESIGN SUPPORT

## PROJECT OVERVIEW

Sydney Desalination Plant has been operating since 2010 and has the current capacity produce 250 million litres of drinking water a day. In early 2020, Sydney Desalination Plant invited EPC contractors to bid on the future expansion of the Plant. The Plant can be scaled up to produce 500 million litres per day for Sydney's future needs. The planning phase is currently "on hold" due to adequate dam water levels.

## SCOPE OF WORK

As part of the expansion to the Sydney Desalination Plant new infrastructure including upgrading existing sea water intake system, pre-treatment system, reverse osmosis system, wastewater treatment system, and upgrading existing chemical dosing and drinking water systems.

RSGx were engaged by our client for M&E project consultancy services during the 16-week tender phase. Services provided included:

1. Design and constructability input
2. TAN design reviews
3. Subcontractor/suppliers selections
4. Supply and installation budgets
5. Develop risk and opportunities matrix

## SOLUTION

RSGx's consultancy personnel expertly reviewed all aspects of the below listed scope items associated with the process and balance of plant system. Over the duration of the project, we were successful in assisting the client with the issuance of up to fifty procurement packages.

### Electrical system:

- ◆ 132kV incoming HV supply and extension of existing 132kV switchyard
- ◆ 11kV/690V/400V Switchboards, transformers, VSD, generators and UPS systems
- ◆ Cable containment
- ◆ General light and power
- ◆ Site earthing and lightning protection
- ◆ Instrumentation and controls
- ◆ Modification and expansion of existing SCADA network
- ◆ Expansion of existing plant radio system
- ◆ New DAS network
- ◆ New electronic access control and CCTV network
- ◆ Dry fire systems

### Mechanical system:

- ◆ Duplex process piping
- ◆ GRP process piping
- ◆ MVAC system
- ◆ Reverse osmosis membranes
- ◆ Chemical storage and potabilization plants
- ◆ Static and rotating equipment
- ◆ Air compressor and vessels

## ACHIEVEMENTS TO DATE

RSGx supported the bid with an electrical bid lead, electrical estimator, mechanical bid lead and mechanical estimator for the duration of the bid program.

RSGx's ability to interface with the design team and extended bid team, including client members overseas, meant that all aspects of the bid were covered. Thus, eliminating potential gaps in scope, and ensuring the client had a fully compliant offer.

Our client's bid Lead said "I will take this opportunity to say how pleased myself and senior Acciona management are internally with how RSGx have performed during this challenging bid and sets the relationship up very well moving forward".

### CLIENT

ACCIONA INFRASTRUCTURE  
AUSTRALIA PTY LTD

### SERVICES PROVIDED

FRONT END ENGINEERING DESIGN

### SCOPE

DESIGN AND CONSTRUCTABILITY  
SUPPORT  
M&E BID MANAGEMENT

### INDUSTRY

INFRASTRUCTURE

### LOCATION

SYDNEY, NEW SOUTH WALES

