

Melbourne Water Eastern Treatment Plant



SYNERTEC



CLIENT

Melbourne Water

LOCATION

Melbourne

CORE CAPABILITIES

- Automation engineering
- Detailed design
- Factory acceptance testing
- Site acceptance testing
- Commissioning
- Ongoing maintenance
- 24/7 support
- Occupational health and safety management

TECHNOLOGIES

- Siemens PCS7 control system
- Aspen IP21

PROJECT SUMMARY

The Eastern Treatment Plant (ETP) is a major wastewater treatment plant for the Melbourne Metropolitan area, which must run continuously every day of the year. The award-winning plant is the largest ozone and ultraviolet production facility of its kind in the Southern Hemisphere and treats almost half of Melbourne's sewage at a volume of 330 million litres per day. The plant generates electricity from sewage gas, supplying 40% of its own energy needs, and uses a sophisticated three-stage treatment process to transform sewage to an advanced tertiary standard of Class A re-usable water.

SCOPE OF WORK

Synertec has been continuously engaged by Melbourne Water since 2007 providing 24/7 support to the Siemens PCS7 distributed control system at the ETP, along with additional project services as required.

SYNERTEC'S SOLUTION

Synertec has a well-established team of engineers with an understanding of Melbourne Water's control system requirements and the challenges that the complex hybrid system represents given its size and diversity in both hardware and software installation.

Raw sewage enters the plant and goes through an intensive three-stage treatment process, being Primary, Secondary and Tertiary Treatment. Synertec is involved in the process control development and maintenance of all three areas.

Synertec has collaborated with Melbourne Water to:

- Generate migration plans and strategies to standardise and avoid the risks of obsolescence in their assets
- Proactively implement the use of new technology to improve reliability and availability of the process control system to operations, involving alternative hardware architecture and computer virtualisation
- Develop and implement risk mitigation strategies
- Develop management procedures encompassing reporting, scheduling, and budgeting

Over the life of the contract, Synertec has supported numerous capital expenditure projects including PCS7 version upgrades, hardware upgrades, alarm rationalisations, and plant integrations.