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#### Organisational Overview

Ecosave is a leading global independent Energy Services Company (ESCO) with 17-years of experience in designing and implementing Performance-based Energy and Water Efficiency Projects for 600 organisations across more than 3,000 sites throughout Australia, New Zealand and the USA.

Founded in Sydney in 2002, Ecosave continues to grow and currently employs more than 70 specialists and support staff across offices in Melbourne, Sydney, Adelaide, Wellington NZ and Philadelphia in North America. The business has attracted senior managers from within the industry and developed its capabilities in all areas of energy efficiency.

Ecosave's ability to better identify and achieve savings for clients is recognised as a key element in helping organisations achieve and exceed their financial and sustainability objectives. Ecosave's multidisciplinary and holistic solutions allow effective delivery of Energy Performance Contracting (EPC) services to government agencies and commercial organisations.

With three teams of experienced professionals partnering with you to provide all your sustainability needs and requirements through an integrated service delivery model, Ecosave has the expertise to deliver sustainability consulting, advisory and energy audit reports (Ecosave Advisory); design, procurement, installation and commissioning of performance-based energy saving projects (Ecosave Efficiency), as well as ongoing energy management and asset maintenance (Ecosave Watch).

We help organisations focus on their core business by providing a full suite of end-to-end energy efficiency services and sustainability management solutions. We have the people, flexibility and experience to meet your specific needs.

Company Details Company Name Ecosave Pty Ltd

ABN 39 099 777 474

Primary Address in Victorian Government 3/34 Redland Dr, Mitcham Victoria 3132

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**Position** Group Managing Director

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Financial Details Minimum Contract Size \$100,000

Maximum Contract Size \$75 Million
Public Liability Insurance \$20 Million
Professional Indemnity Insurance \$20 Million

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#### Accreditations

- Energy Efficiency Council (EEC) Corporate Member
- Certified Measurement and Verification Specialists (CMVP)
- Certified Energy Efficiency Leaders (CEEL and CEES)
- Certified Energy Managers (CEM)
- Clean Energy Council (CEC) Approved Solar Retailer
- NABERS Accredited Assessors
- Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH)
- American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
- Energy Management Association (EMANZ)
- Project Management Institute
- Six Sigma
- ISO 9001 Quality System Certification

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#### **Core Competencies**

Ecosave has been delivering EPCs and guaranteed energy and water savings to more than 3,000 sites in Australia and internationally since 2002.

We deliver the following solutions for government agencies and commercial organisations:

- Energy Performance Contracting (EPC)
- Guaranteed Energy Savings Projects (GESPs)
- Energy Audits to AS/NZ Standards (Type 1, 2 and 3)
- Energy Efficiency, Generation & Sustainability Investment Reports (EEGSI)
- Funding Ecosave Services Agreements (ESA) (convert CAPEX to OPEX)
- Measurement and Verification of savings to international standards (IPMVP model)
- NABERS Assessments
- Energy & Carbon Emissions Reporting
- Building analytics, building tuning and continuous commissioning
- Fault Detection & Diagnostics (FDD) and Data Driven Maintenance (DDM)
- Utility Management, Bill Verification and Energy Procurement
- Facility Management
- Energy Management Systems
- Sustainability strategy plans

Ecosave's team of specialist engineers will identify and design energy and water efficiency solutions which meet the requirements of your organisation and sites including:

- Embedded Energy Generation such as Co/Trigeneration, Solar, Wind, Biofuel and energy recovery systems
- Heating Ventilation Air Conditioning replacement/ optimisation/ heat recovery
- Building controls (BMS) optimisation / re-commissioning and installation
- Power optimisers, power factor correction and demand management systems
- Solar hot water
- Lighting upgrades, appliance replacement and controls
- Industrial and process engineering, compressed air systems.
- Building Sealing
- Water management, pumping system optimisation, water and waste water treatment optimisation, rain and storm water harvesting, amenities water savings, chilled and heating water systems
- Energy management including utility sub-metering, monitoring of usage, bill management, customer-friendly dashboard and monthly reporting, ongoing consumption reduction advice
- Embedded Networks

Within speciality fields and industries / operations such as:

- State and Federal Government agencies and departments
- Local Government Council Infrastructure including Heritage Listed buildings, council office buildings, museums, libraries, art galleries, community centres, aquatic centres and sports facilities
- Education public and private schools, TAFES and Universities
- Health private/government hospitals, including major metropolitan hospitals, regional hospitals, clinics and aged care facilities
- Corporate/commercial
- Large format retail (shopping centres)
- Industrial/manufacturing food and beverage manufacturing plants
- Water industry

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#### **Previous & Current EPC Experience**

Customer	Eastern Alliance for Greenhouse Action – 3x EPCs	Description
	i) Yarra Ranges Council ii) Boroondara City Council iii) Maroondah City Council	
Project Cost	\$6.9 Million (combined)	The Eastern Alliance for Greenhouse Action (EAGA) is collaboration of eight councils in Melbourne's East, w
Annual Savings	\$678,480 (combined)	on regional programs that reduce greenhouse gas emis
Payback Period (yrs)	10.2 years	facilitate regional adaptation. EAGA has recently en Energy Performance Contracting (EPC) program – to in the Australian Local Government sector.
Date Completed	2019	

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Yarra Ranges (YRC), Maroondah (MCC), Boroondara (BCC) and Knox City Councils (KCC) were the first members to initiate the EPC process. Following a competitive tender process, all four councils indicated their intention to contract the Detailed Facility Study (DFS) to Ecosave in April 2017. Ecosave completed DFSs at 20 buildings across three councils including YRC, MCC and BCC. The DFS for KCC is presently being finalised for submission to the Council.

All three EPCs (YRC, MCC, BCC) are in the process of being implemented by Ecosave. The three EPCs involve upgrade works at 20 sites including: Aquatic and Leisure centres, Sports Complex and facilities, Health clubs and Gyms; Community, Family and Learning Centres; Town Halls, Museums, Art Galleries, Council Chambers and Offices.

Range of ECMs include: Lighting upgrades, refurbishments and controls, Solar PV installations, HVAC and Mechanical upgrades and optimisations; Pool pump VSDs, Voltage regulation units, power factor correction and overnight base load reduction; BMS recommissioning and BMS analytics; Window film tinting and pool blanket systems.

The expected outcomes across all three Councils include more than 2,900 MWh in electricity savings, 126MWh of electricity from Solar PV export, 658 KVA energy demand reduction, 23,800 GJ of Natural Gas savings and carbon reduction 5,100 tonnes of equivalent Greenhouse Gas Emissions (CO2-e)

For information regarding our experience with Local Government Councils, please visit https://ecosave.com.au/councils

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Customer	Chisholm Institute of TAFE	Description
Project Cost	\$2.9 Million	Chisholm Institute is a TAFE Institute in South-East Melbourne. Ecosave
Annual Savings	\$340,000 per annum	has implemented a \$2.9M Energy Performance Contract for Chisholm across its 65 buildings within 6 campuses.
Payback Period (yrs)	7 years	across its ob buildings within o campuses.
Date Completed	Feb 2016	<ul> <li>Significant solutions that Ecosave has implemented at Chisholm include: Replacement of entire HVAC system of the largest building to a centralised chiller and boiler system to save 478 MWh of electricity</li> <li>Installed LED lighting technology across all campuses to save 878 MWh of electricity</li> <li>Installation of new assets including boilers, BMS systems, and air conditioners</li> <li>The EPC is in its Measurement &amp; Verification stage and interim data points to Ecosave overachieving its savings targets.</li> </ul>
		For more information about this project please visit  https://ecosave.com.au/news-insights/case-study/chisholm-institute-epc/

Customer	City of Yarra	
Project Cost	\$3 Million	Т
Annual Savings	\$218,151	1
Payback Period (yrs)	9.7 years	(
Date Completed	Jan 2018	â

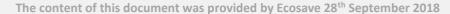
The City of Yarra (CoY) has a proud history of being a leader in environmental action and carbon management. In 2014, CoY initiated a 10-year Energy Performance Contract with the vision to reduce the Council's greenhouse gas emissions and significantly reduce their energy and maintenance costs. Ecosave was chosen as the preferred tenderer for the \$3.3million Energy Performance Contract (EPC).

Description

The EPC comprised a wide range of energy conservation measures across 18 of the City's buildings and facilities including: Town Halls, libraries, recreation centres, day care centres, amphitheatres, pavilions and swimming pools, spanning the inner Eastern and Northern suburbs of Melbourne. Ecosave designed and implemented all the energy saving solutions, including: Solar PV (162 kW), LED upgrades, HVAC optimisation, Cogeneration system installation, Boiler unit replacement, building sealing, energy saving modules, appliance controls, refrigerant additives and BMS optimisation and upgrades. Ecosave committed to guaranteed savings of \$224,000 p.a. resulting from 1,402 MWh and 8,845 GJ in reduced energy consumption.

As of 2018, all works have been completed and all savings for years 1 and 2 (of 10) have been measured and verified as accurate against the international Protocol. As an outcome of CoY's decision to engage Ecosave in an EPC, the Council is on track to achieve its sustainability targets, while eliminating the financial and technical risks typically involved in a project of this magnitude. The Savings Guarantee insulated the Council from such risks when project returns were initially lower than predicted and Ecosave promptly reimbursed the savings shortfall. As energy prices escalate, the Council's Return on Investment will be significantly higher than originally calculated.

For more information please visit <a href="https://ecosave.com.au/news-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insights/case-study/measurement-verification-city-yarra-epc-confirms-big-insi





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Customer	East Gippsland Water Authority
Project Cost	\$1.13 Million
Annual Savings	\$142, 482
Payback Period (yrs)	7 years
Date Completed	Sep 2017

East Gippsland Water is a small regional water authority in the East of Victoria that serves an area of 21,000 square kilometres in diverse country including coastal areas and wetlands and up in to the Snowy Mountains and Alpine areas. East Gippsland Water engaged Ecosave to deliver EPC services in 2014 and Ecosave is delivering energy efficiency projects across fourteen key sites which will achieve energy savings of 761,844 kWh p.a. and a CO2-e emissions reduction of 1006 t p.a.

Description

The fourteen key sites addressed by the EPC include 3 wastewater treatment plants where energy consumption through lagoon aeration is being addressed with the implementation of solar aerators as well as controls around recirculation pumps. Pumps ranging from 20kW to 200kW at some key water pumping stations are being replaced with smaller, more efficient models and new pumping regimes are being implemented. High efficiency LED lighting solutions with integrated controls are being implemented at a number of sites including East Gippsland Water's head office. Large scale and small-scale roof and ground mounted solar PV is being deployed across a number of sites, and controls around incoming water quality and the operation of the central DAFF water treatment plant, which is integral to East Gippsland Water's water supply network, are being addressed.

For more information about this project please visit <a href="https://ecosave.com.au/news-insights/case-study/east-gippsland-water-epc/">https://ecosave.com.au/news-insights/case-study/east-gippsland-water-epc/</a>

Customer	City of Sydney	Description
Project Cost	\$7.5 Million	The City of Sydney (the City) is committed to improving its environmental
Annual Savings	\$1.2 Million	performance under the 2030 Sustainable Sydney Vision. In 2011, the 0

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Payback Period (yrs)	6 years
Date Completed	Nov 2015

went to market for a partner to help them meet their vision, by delivering an Energy and Water Efficiency Retrofit of 47 of the City's Buildings and Operations, one of the most ambitious of any Australian government. The energy and water retrofit project, worth \$7.5M, is a key component of the Sustainable Sydney 2030 plan. The city will see improvements in lighting with a comprehensive suite of LED lighting technologies, HVAC, VSD's, PC power management, occupancy comfort and water-saving initiatives.

Ecosave designed and installed a package of HVAC solutions to optimise performance of the existing systems, increasing efficiency and reducing wastage. These solutions included:

- Energy Savings Modules on chillers to match output with demand, and reduce cycling
- Economy cycle optimisation to better make use of outside ambient conditions
- Variable speed drives on cooling towers and fans to match output with load
- Cooling tower optimisation including temperature resetting
- Building Management System reprogramming including Optimum Start/Stop and Night Purging

For more information about this project please visit our website <a href="https://ecosave.com.au/news-insights/case-study/city-of-sydney/">https://ecosave.com.au/news-insights/case-study/city-of-sydney/</a>

### Referees

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