



## Frank Vale award

### Matthew Mungall SA's nominee

'The experience gained in representing South Australia in such a high-profile national competition has been life changing. I was pleased with my presentation and heartened by the many positive responses and the high praise of the judges.'

Matthew Mungall

The Frank Vale Award recognises exceptional achievement by young people in the Australian cold chain.

In making it to the nationals as South Australia's nominee, Oomiak's Matthew Mungall was already a winner, having taken out the South Australian RJ Barry Award.

Cate McGuire said that Matthew equipped himself outstandingly well. 'Even though the award went to another nominee, Matthew demonstrated why we are very proud to have him on our team', she says.



Matthew Mungall & his partner Jodie Trainor (centre) with the Oomiak team

## refrigeration plants for cold stores

Typically, refrigeration plant is responsible for the majority of electrical consumption in a cold storage operation, accounting for 80%–90%. Rising electrical prices and fierce competition in the cold storage market means it is essential that refrigeration plant incorporates the most efficient features possible while also being cost effective.

Another element that now needs to be considered is the choice of refrigerant, with global warming concerns pushing governments around the world to act. As a result Australia, for its part, has introduced a National Greenhouse Emissions Reporting Scheme (NGER) and is on the verge of introducing an ETS, which has serious implications for the refrigeration industry. Cold store operators are now being forced to consider the carbon footprint of their facility along with other operating costs, as the ETS will not only penalise inefficient refrigeration plant and store operation, but also plants with HFC and HCFC Freon refrigerants.

Oomiak has recognised the need of cold store operators to address these issues, and has been at the forefront of the development and application of energy efficient environmentally friendly solutions to the food distribution industry.

## RWTA sub-committee on energy efficiency

### Mark Holden Vice-Chair

Mark Holden has been appointed Vice-Chair of the Refrigerated Warehouse & Transport Association of Australia's (RWTA's) new Sub-Committee on Energy Efficiency.

With energy the second-largest cost item for cold store operators, energy efficiency is a hot topic for most—if not all—of Oomiak's customers,

Mark says its importance is reflected in the formation of this sub-committee which, among other matters, is charged with identifying areas where energy efficiencies will translate into significant cost savings.

General Manager of Montague Cold Storage Rod McQueen is the sub-committee's Chair.

Mark's appointment follows on from the Greg Montague Award, recognising his outstanding contribution to the Australian cold chain industry.

In announcing the award, RWTA Chairman Peter Quinn recalled how 20 years ago RWTA legend, Ken Scott, described Mark as 'the smartest refrigeration engineer in the country'.

The award is in memory of Greg Montague, Director Montague Cold Storage, who died in a road accident in 2008. Greg Montague's daughter Crystal presented the award at the RWTA Conference Gala Dinner.



L Crystal Montague, Mark Holden & Andrew Montague, Greg Montague's son

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Winter 2011



L Oomiak's Mark Twigger, Mark Holden & David Lange

## Oomiak wins Melbourne...

Oomiak in partnership with AG Coombs has won the refrigeration contract for the new \$350 million Melbourne Markets—one of the Victorian Government's biggest infrastructure projects. Oomiak's centralised system design meets the refrigeration needs of wide-ranging market tenants from under the one roof for the first time. It's better for the environment, cheaper to operate and quieter than the system as originally proposed.

Construction began on the new Melbourne Wholesale Fruit, Vegetable and National Flower Centre in January.

The project involves relocating the markets in Footscray in west Melbourne to a new 55-hectare site at Epping in Melbourne's north, and redeveloping them into a modern, innovative and efficient fresh produce trading and distribution centre.

Lend Lease is responsible for design and construction, with the project under the management of Major Projects Victoria for the Department of Innovation, Industry and Regional Development.

Oomiak won the industrial refrigeration component for the new 20,000 square metre purpose-built markets facility, in conjunction with mechanical services

company A.G. Coombs. Oomiak is designing and delivering the plant from concept through to construction, and A.G. Coombs is installing the reticulated glycol piping. David Lange, Oomiak's Project Manager for the project, says it is off to a great start.

Chief Executive Cate McGuire said Oomiak's Director Business Strategy, Mark Holden, and Technical Manager, Mark Twigger, designed the centralised system from scratch. 'Similar to the old markets, refrigeration for the Epping facility was to be based on individual systems located on the roof. However, Oomiak's alternative central refrigeration plant solution delivers significant efficiency and environmental advantages to the markets eventual 152 individual tenants', she says.

## high praise

It was on for the young and not so young at the Refrigerated Warehouse & Transport Association's (RWTA's) National Conference Gala Dinner in Melbourne in late 2010. Oomiak's Customer Support Supervisor Matthew Mungall represented South Australia in the Frank Vale Award for outstanding young achievers, and founder and Director Business Strategy Mark Holden picked up the Greg Montague Award for Distinguished Service. This recognition by industry peers is indeed high praise. [continued on back](#)

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More about the Victoria Markets and other project wins inside

## ask the experts Sri Lanka

Oomiak's reputation in Australia for services such as auditing, commissioning and problem solving now extends internationally. Over the past two years these services have been provided to a cold-storage customer in Sri Lanka.

Oomiak's relationship has developed from an initial site audit, which was followed by a series of programmed visits when works that had been identified and agreed to with the customer as high priority were carried out. These included both operational and safety aspects of the refrigeration system.

Oomiak's experienced technicians have an in-depth knowledge of the customer's facility generally and the refrigeration plant more specifically, along with an understanding of the skills and capability of in-house maintenance personnel.

Oomiak produced a detailed report for the customer summarising observations and findings, along with the results of diagnostic testing and the repair works undertaken. Oomiak is also helping to develop the skills of in-house staff, so that they better understand the plant and equipment and how to manage the overall system operation.

The customer is now focused on identifying, planning for and delivering improvements that achieve both immediate and long-term improvements to their business in terms of reliability, operational efficiency, safety and compliance.



Murray Smith, senior Oomiak Commissioning Mechanic, working alongside the in-house client maintenance team

## wholesale fruit, vegetable and flower market

### Designed with a green focus

As it is fully developed over the next 10 to 20 years, the new market precinct—with its core trading facility, warehousing, distribution centres and value-added business—is expected to drive in excess of \$1 billion of investment in the site.

Oomiak's design challenge for the refrigeration system was to support the Victorian Government's goal to redevelop the market into an efficient and integrated trading environment that:

- **Meets current and future needs for warehousing space**  
The trading floor alone will provide users with improved access to all areas of the floor, and there will also be undercover loading and unloading bays immediately adjacent to the trading floor, an important consideration in maintaining quality of product.  
There will be ample opportunity for warehousing in close proximity to the trading floor. The current market has 30,000 m<sup>2</sup> of warehousing (with no capacity to expand). It is believed there is a demand for around 60,000 m<sup>2</sup> of warehousing, which can easily be accommodated at the Epping site.
- **Caters for modern logistics**  
The new market at Epping will provide market users with significant improvements in logistics, access and occupational health and safety.
- **Enables market users to enjoy the opportunities and benefits that come from being part of an interactive and integrated fresh food-related business precinct.**

The new markets are scheduled to be fully operational in 2012.

The project is one of the first to be constructed under the Pilot Green Star Industrial rating, set up to improve the sustainability performance of industrial buildings.

### current projects

Oomiak is working on a diverse range of projects across Australia, including:

#### Baiada Poultry

Refrigeration Plant Upgrade at two locations, Wulkuraka and Mareeba, Queensland.

#### Farm Pride

Annex extension, Melbourne, Victoria.

#### Gippsland Food Co

Ammonia Pipe Work project, Melbourne, Victoria.

### Oomiak's solution

Oomiak has developed a refrigeration strategy that will deliver the environmental objectives applied to the operational facility, while adding to the reliability and operational performance of this critical service.

#### Key objectives included:

- Ozone depleting potential—the use of non ozone depleting refrigerants in all aspect of the design.
- Emissions Trading scheme (ETS—with the introduction of the scheme expected before the end of the project it was important that the choice of refrigerant did not expose the operation to undue additional costs related to the scheme.
- Hydrofluorocarbon (HFC) phase out—selection of refrigerant should consider the future phase out of greenhouse gases.
- Energy consumption—provide a cooling solution capable of the highest consistent levels of electrical efficiency per kilowatt of cooling.
- Total equivalent warming impact (TEWI—environmental considerations of the system's carbon footprint.
- Life cycle costing—selection of plant design, refrigerant choice and material selections consistent with the stated design life of the facility.

#### Other important objectives for the project are that:

- It is designed and constructed in accordance with relevant food-grade construction standards and requirements.
- Flexible cooling capacity is supplied to each tenancy to meet the specific individual tenancy requirements.
- Future expansion capability is inbuilt within the design.
- Plant and equipment is configured to lower operational and personnel risk.
- It is a 24/7 reliable operation.
- It incorporates code compliant equipment, materials and workmanship.
- Quality of delivered product meets planned life expectancy.



Baiada Wulkuraka

### Oomiak's solution continued

Oomiak's solution was a central plant which, as this suggests, involves the centralising of the core refrigeration plant equipment and capacity for the site, with a low risk solution pumped out to all tenancies.

This approach allows Oomiak to use ammonia as the primary refrigerant in a series of small and controlled charges to further reduce risk. At the same time, this improves equipment efficiency and enables inbuilt redundancy in the form of shared critical spare equipment that will serve the total site.

The central facility uses an ammonia-based fluid chilling system with cooling capacity of up to 15,000 kW (or 15 MW).

#### Key benefits are:

- Use of natural refrigerants with zero global warming potential.
- Significantly lower energy costs.
- Greater levels of redundancy for all tenants through reserve plant capacity.
- A flexible cooling solution to meet the needs of individual tenancies.
- Consistent with the 30-year design life of the new facility.

In partnership with AG Coombs the project will be delivered over the next two years.

## project profile extension to Woolworths meat works, Bunbury, WA

Oomiak is working with Perkins Builders to extend the existing meatworks facility to meet future growth.

#### Key deliverables are to:

- Make the best use of all existing plant and infrastructure in meeting the total site refrigeration requirements, with new equipment to be of a compatible type to that already in place.
- Ensure the standard of workmanship and equipment is consistent with the existing.
- Deliver the project in line with stated project delivery schedules.
- Achieve expansion without undue impact on existing facility operations.
- Design pipework circuit so that existing plantroom suction and other operating conditions are maintained.
- Configure new plant and equipment to lower operational risk where practical.
- Maintain a 24/7 reliable operation.
- Ensure the facility is electrically efficient.
- Make all equipment, materials and workmanship code compliant.
- Ensure the quality of delivered product meets planned life expectancy.
- Support the facility post contract as and when required.

The project—led by Eu Jin Tan (project manager) and Mick Williams (site leader)—is well underway and running on time and to budget.

## advisory services

'The effectiveness of an audit is dependent on a thorough understanding of refrigeration systems function and the business needs.'

Advisory services are a growth area of Oomiak's business as customers look to know more about their facilities. Our services are sought for such diverse purposes as planning capital investment, process analysis, energy reduction and establishing a base line for performance benchmarking. This means that customers can plan better, achieve greater efficiencies, assess future options and check legislative compliance.

#### Our work in this area is varied and includes:

- Concept design.
- Budget forecasting.
- Services design and documentation.
- Engineering.
- Plant safety compliance audits.
- Plant and equipment performance review and recommendations.
- Operational efficiency review.
- Energy efficiency audit and recommendations.

Oomiak applies a technical, practical and business approach to all aspects of its consultancy services so that clients receive information that can shape the future of their businesses.

Backed by many years' experience in designing, installing and maintaining refrigeration systems, Oomiak's technicians and engineers provide the following audits:

- Plant Compliance Audits—carried out in accordance with AS1677:1998 and, where applicable, the International Institute of Ammonia Refrigeration Checklists. Also covered are AS/NZS 3666:2002 and associated codes, including AS3788:2001 (relief valve inspection) and AS4041:1998 (pressure piping).
- Plant Efficiency Audits—carried out to identify and recommend energy cost-saving measures for both the short and long term.



L Oomiak's Mark Twigger, John Katsikis & Peter McGuire—working on a customer solution