

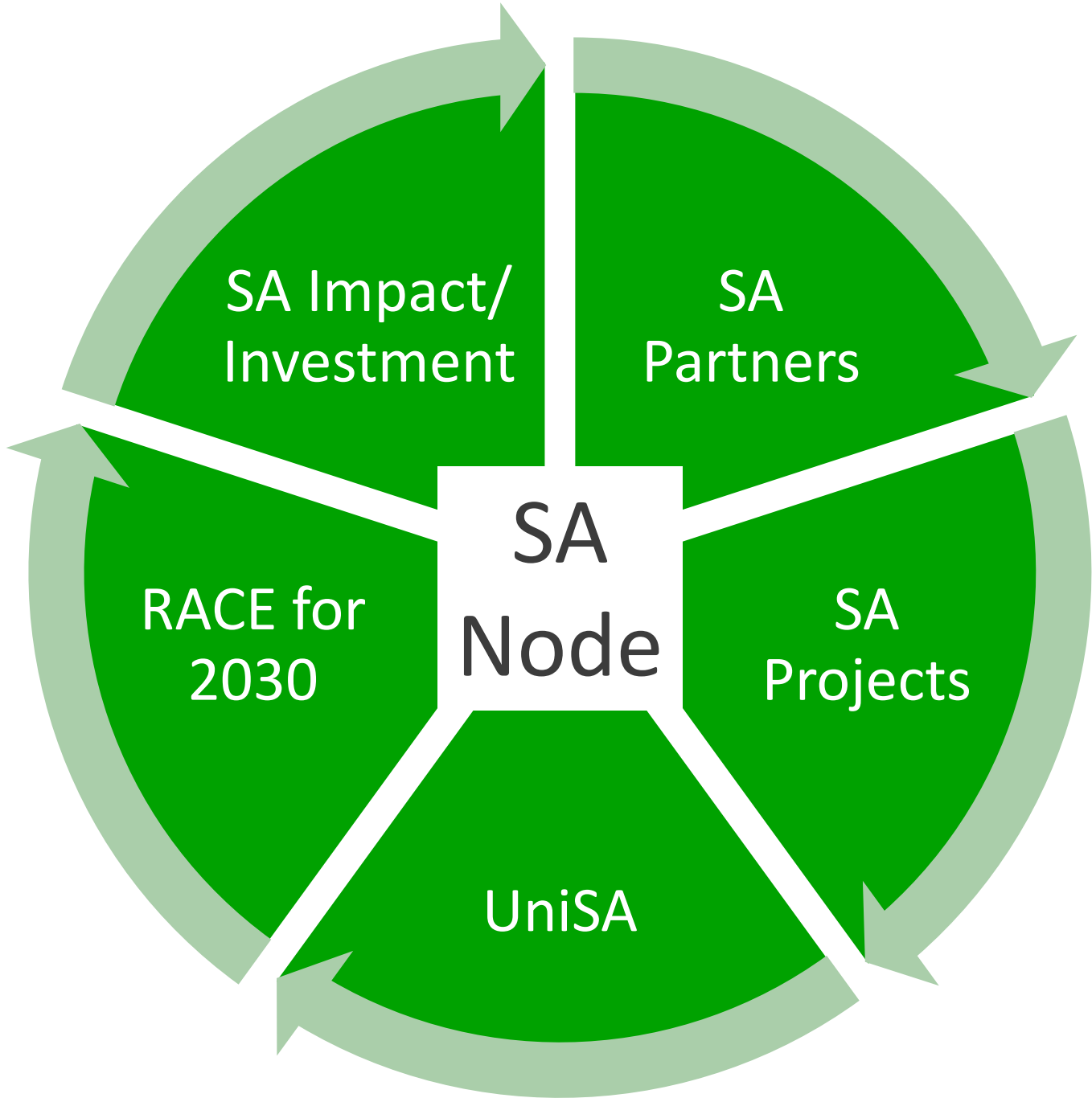


RACE for  
**2030**

RELIABLE  
AFFORDABLE  
CLEAN  
ENERGY

# SA Node

25 October 2022



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# RACE for Business: CO<sub>2</sub> refrigeration for Supermarkets

**GLACIEM**  
COOLING TECHNOLOGIES

**coles**

**SEELEY**  
INTERNATIONAL

**AUSTRALIAN  
ALLIANCE FOR  
ENERGY  
PRODUCTIVITY**

**University of  
South Australia**

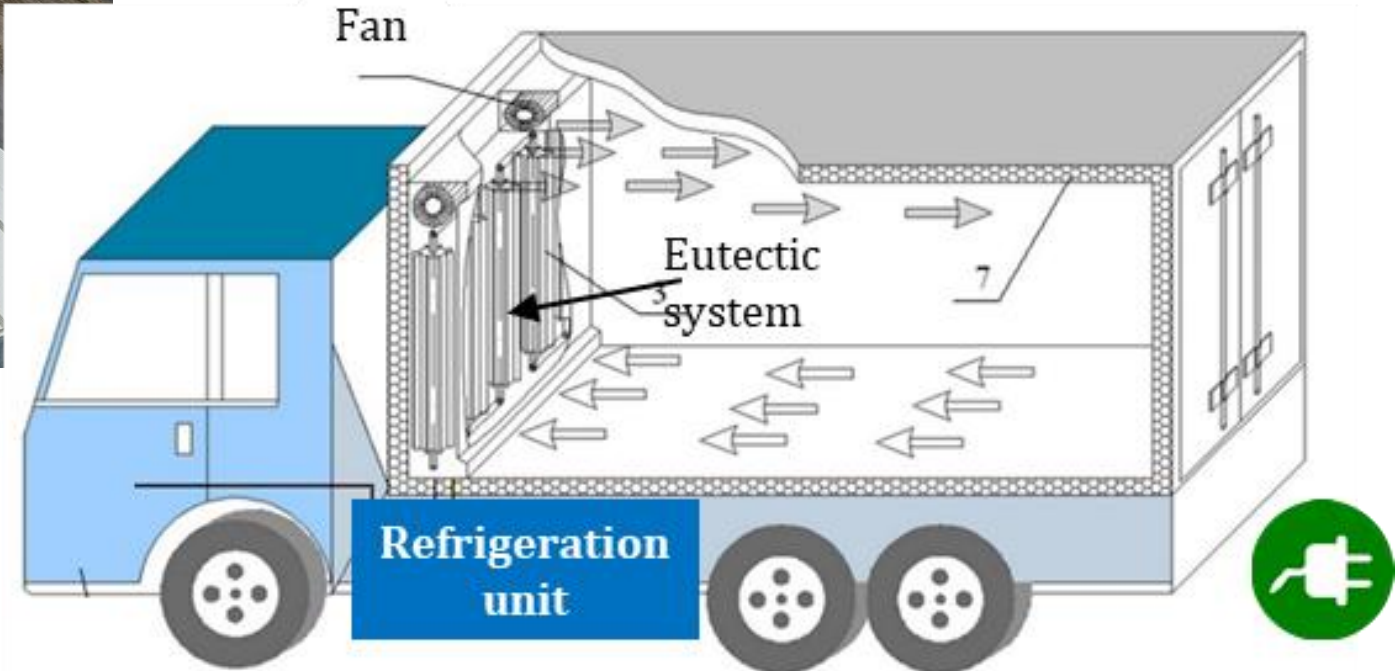
**QUT** Queensland  
University  
of Technology

Energy efficient indirect evaporative CO<sub>2</sub> refrigeration system  
The two main supermarkets chains in Australia have moved to using CO<sub>2</sub> only systems for refrigerated display case cooling.

However due to the nature CO<sub>2</sub> as a working refrigerant operational efficiency decreases as the ambient air temperature increase above 22°C

This project will model and validate the performance of a new-generation, energy efficient CO<sub>2</sub> refrigeration system. The system incorporates an indirect evaporative cooling system, combined with CO<sub>2</sub>, to deliver, up to 16% improvements in system efficiency and 24% reduction in peak demand.

# RACE for Business: Electrifying the Cold Chain





# In development: SA Pilot/Demonstration Projects

Energy upgrades for Australian homes



South Australia  
Energy Efficiency in  
Remote Housing

Strategic EV integration  
(Stage 2&3)



South Australia  
Electric vehicle charging  
in holiday parks

