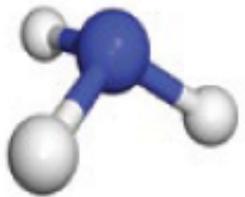


Building a safe, sustainable workforce

Ammonia Technicians

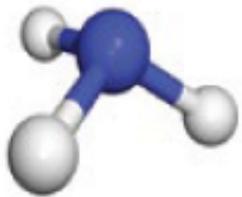


John R Mott



Existing Ammonia Workforce

- **Around 250 Fully qualified ammonia technicians in Australia at present**
- **Most of these work for contractors in the refrigeration industry**
- **They service, maintain and support hundreds of facilities nationwide**
- **The number of new technicians being trained is not keeping up with demand**



Existing Training System for Ammonia Technicians

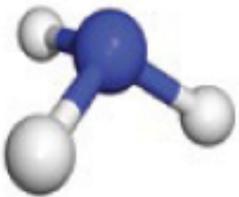
Trained on the job by private contracting companies employed as apprentices

Hands on training is achieved when the apprentices attend the many ammonia plants their employer is contracted to service, maintain and support.

Apprentices will be assigned to experienced senior technicians who will train them to become competent and self reliant in service, maintenance, troubleshooting, evacuation, overhaul, commissioning, control systems, safety and all other aspects required for the ongoing reliable operation of the ammonia plant.

Since 2000 there have been virtually no ammonia technician theory or practical training available from Australian colleges or trade schools

The numerous attempts to bring experienced technicians in from overseas have had very limited success.



Workforce Development - Future

Development of the ammonia energy industry will require more technicians

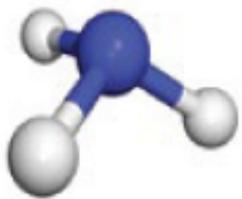
Estimated that an extra 250 technicians will be required over the next decade

Training additional technicians being apprenticed to refrigeration contractors

The high cost of training apprentices means that it is unreasonable to expect the contractors to train a workforce for an entirely new industry without compensation.

Powering the Regions Fund applications first batch assessment closes Nov 1st

PRF third objective : Provide skills development to existing industrial workforce in new equipment or processes that contribute to the reduction of scope 1 emissions.

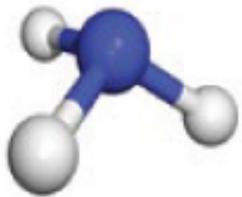


Suggested Next Steps

Convene a meeting with stakeholders

Form a working group

Develop a roadmap and budgets to enable funding applications



What if we do nothing ?

The energy industry is likely to pay much higher rates for technicians than the refrigeration industry.

This may result in a workforce flight to the energy industry

It could present food security issues given that most Australian food manufacturing facilities, abattoirs, dairies, cold stores and distribution centres operate on ammonia refrigeration systems.

