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**ENERGY SKILLS QUEENSLAND ANNUAL CONFERENCE 2016**

**7 September 2016**



Industry Consultation Forum: HVAC

# Heating, Ventilation and Air-conditioning Industry Skill Shortage

The goal of this consultation forum is to discuss skilling shortages on workforce and employment and to facilitate solutions to address the prolonged skill shortage of qualified and capable workers

# Outline

1. Statistics and projections
2. Industry Consultation
3. Pathway options
4. Develop agreed actions

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# Statistics and Projections



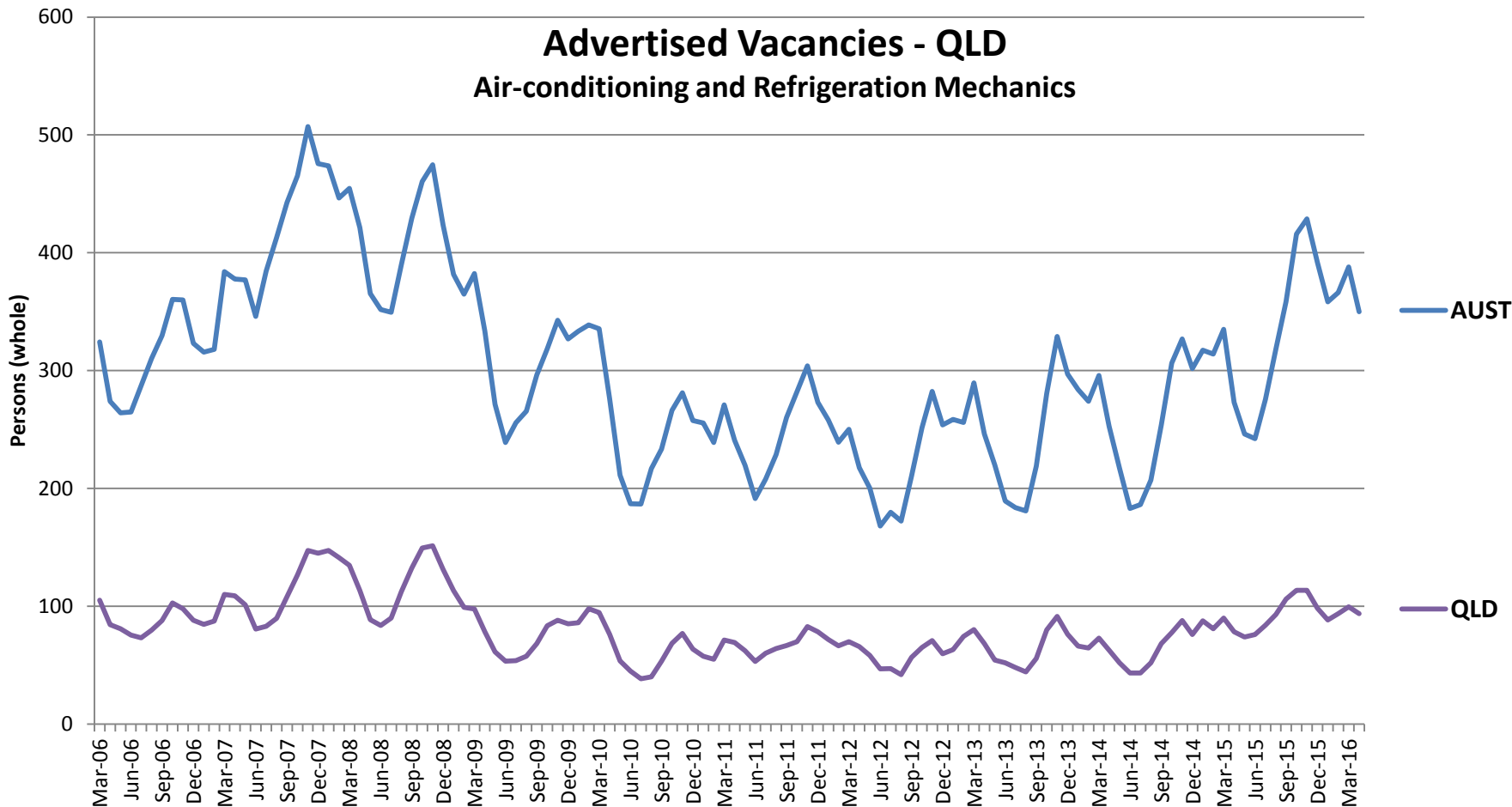
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# Statistics and Projections

- Demand for workers is steady
- High percent of applicants are unsuitable
- National skill shortage for 25 of last 30 years
- Apprentice numbers increasing
- Cancellations at 16%
- Projections show no medium term change

# Advertised Vacancies - QLD

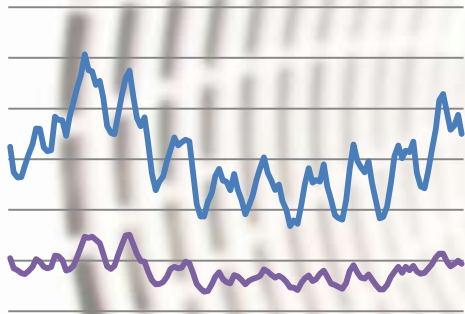
## Air-conditioning and Refrigeration Mechanics



# HVAC - Vacancy Data

Department of Employment report:

- 50% of employers did not fill vacancies
- 40% had no suitable candidates
- Under 5 qualified candidates per job
- 62% of applicants are qualified
- 87% of all candidates unsuitable





# Employed Persons - Queensland

## Air-conditioning and Refrigeration

Persons ('000)

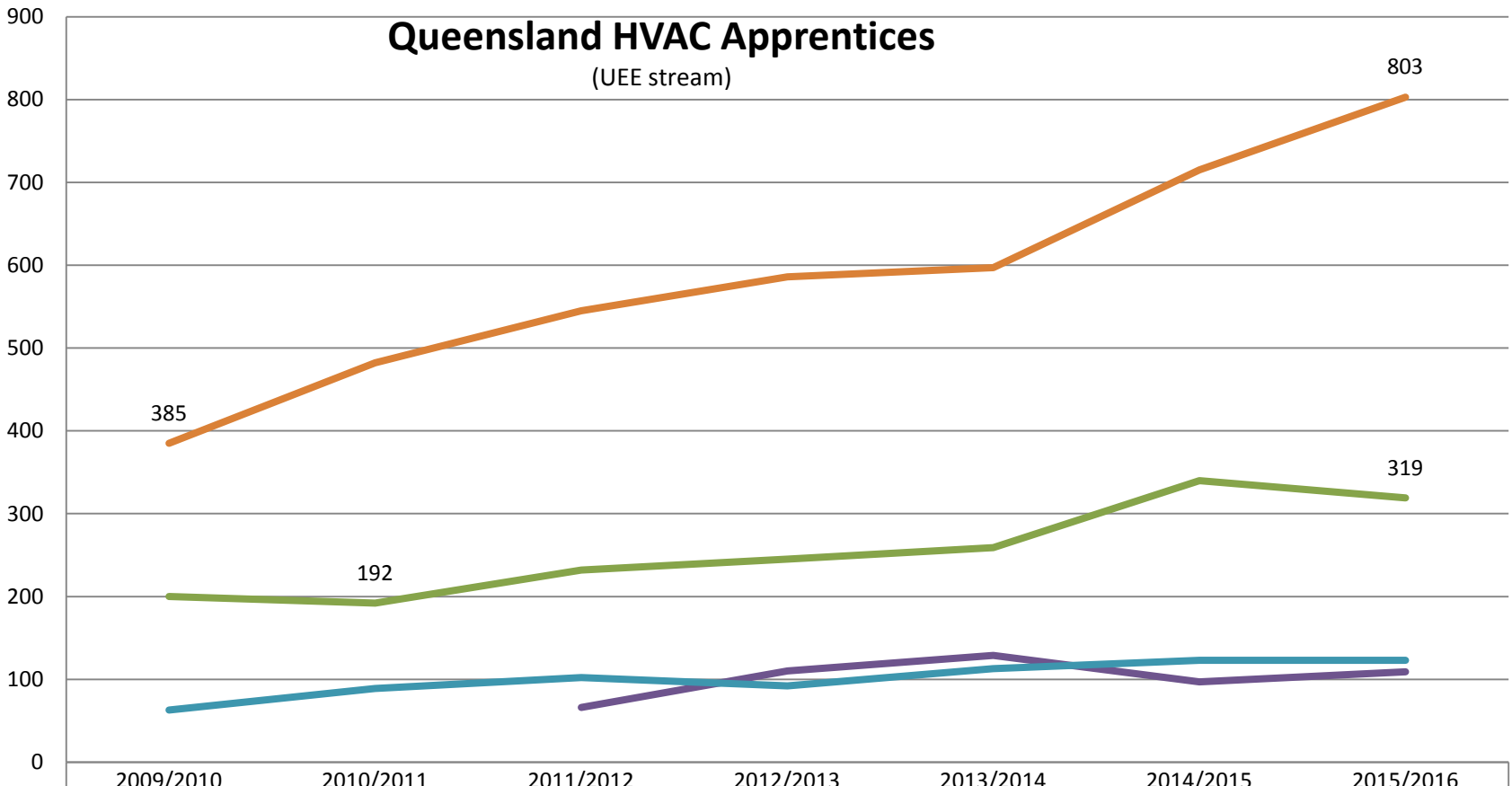


	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Males	1.6	1.7	2.7	2.2	1.8	1.9	2.7	3.1	2.5	2.9	2.8	3.7	3.9	2.7	3.6	3.2	2.7	4.1	5.5	5	6.1	4.6	5.6	5.1	3.3	4.9	7.7	3.7	5.3
Females	0	0.1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0.4	0	
Persons	1.60	1.70	2.70	2.20	1.80	1.90	2.70	3.10	2.50	2.90	2.80	3.70	3.90	2.70	3.60	3.20	2.70	4.10	5.50	5.00	6.10	4.60	5.70	5.10	3.30	4.90	7.70	3.80	5.30

# Queensland HVAC Apprentices

(UEE stream)

Department of Education and Training



	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Commencements	200	192	232	245	259	340	319
Completions			66	110	129	97	109
Cancellations	63	89	102	92	113	123	123
In Training	385	482	545	586	597	715	803

Occupation	Employment Level November 2015	Department of Employment Projections November 2020		
		Total	Growth	Change
Air-conditioning and Refrigeration Mechanics	24267	24299	<b>32</b>	<b>0.13%</b>
Electricians	165540	191566	26025	15.72%

# National Projections

## November 2015 to November 2020



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# Industry Consultation



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# Licensing and Regulations

Your response to licensing and regulation change was obvious and overwhelming:

- **Skill based licensing**
- **National licensing**

# Lacking Proficiencies

- Refrigerant handling practices
- Fault finding and repair work
- Electrical skills and underpinning knowledge
- Installation and commissioning
- System design
- System efficiency

# Future Workforce Needs

What skilling does your area of the HVAC industry need to be ready for the next 10 years?

- Refrigerant knowledge
  - Natural refrigerants
- Technical Knowledge
  - Control systems including PLC
  - Networking and ICT
  - Metering
- System design
  - Energy efficiency and emission reduction



# Attracting Workers

- Increase Trade Awareness
- Promotion Push
- Upskilling and dual trade options
- Government funding
- School-based apprenticeships
- Push trade to high school career advisors





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# Pathway Options: Open Conversation



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# Alternative Skilling Pathways

- Investigation of multi-discipline skills
- Cross trade skill recognition
- University and trade subject cross overs
- Good support for skilling pathway to be developed
- Concerns around training quality

# Skill Pathways

## **Dual Trade Apprenticeships**

Develop an approved programme whereby an employer who can provide scope of work for two trade outcomes, employs an apprentice who will receive two trade qualifications

## **Trade Skills Assessments**

Programme where an appropriately skilled person is assessed against an existing trade qualification and an amount of gap training is identified and then supplied by an approved RTO

# Dual Trade

## **Apprenticeship providing worker with two qualified outcomes**

- **Off-Job training:**
  - Both qualifications include common competencies [cross discipline]
  - Both require qualification specific competencies
  - Separate 'Capstone' assessments required for each qualification
- **On-Job training:**
  - Apprentice needs appropriate exposure to both trades
  - Supervision by single dual trade person or two individual trade people
  - Training Log [e.g. eProfiling] separate for each qualification

# Dual Trade

## Needs

- I. Strong support from both industries
- II. Training Strategy including duration to be reviewed
- III. Industrial Relations concerns to be reviewed and addressed
- IV. Evidence of advantage to industry and worker
- V. Business case submission to DET

# Trade Skills Assessment

“The **Trade Skills Assessment and Gap Training** program aims to assess the skills of experienced individuals who can demonstrate substantial competency in a priority trade qualification and provide gap training of no more than one-third of the competencies to complete the trade qualification.”

*Source: QLD Department of Education and Training*



# Trade Skills Assessment

Participant selection process is;

- At discretion of funded supplier
- On advice from industry
- Subject to eligibility criteria
- In consultation with DET

# Trade Skills Assessment

- Participant must:
  - Demonstrate substantial competency in chosen trade qualification
- Pre-qualified Supplier (RTO):
  - Selects participants
  - Makes application on behalf of participants
  - Delivers a Trade Skills Assessment to participant
  - Identified and provides 'gap training' programme to complete trade



# What's Next?

- Action items from this meeting
- Confirm next meeting date
  - Wednesday 27 July?
  - Time?

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