

# Heat pump water heater product quality in the VEU program

## *Summary of Findings*



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# Background and Scope

- ▶ Responding to significant disruption in the market for HPWH products: support schemes driving a surge in growth, new market entrants and advantages for low-cost products
- ▶ Our work aimed to better quantify the nature and extent of challenges and threats relating to HPWH product quality<sup>1</sup> by characterising the *challenges* and identifying any *gaps* in existing requirements

<sup>1</sup> For this work we have defined product “quality“ as synonymous with durability and longevity. In this respect, “quality issues” do not necessarily imply technical failures but could also arise from early decommissioning due to consumer dissatisfaction.



# Approach

- ▶ Gather insights
  - ▶ Roundtable discussion of government experts
  - ▶ Seek insights from international experts
- ▶ Desktop review of international jurisdictions
- ▶ Define “dimensions of quality” and evaluated products using public data
- ▶ Seek insights from local experts in the Australian industry



# Findings

- ▶ Poor quality products present a tangible risk in an environment that incentivizes low cost or has low consumer buy-in
- ▶ We identified a wide range of potential failure modes
- ▶ At present, it is not clear that any specific product(s) are high-risk
- ▶ Not all failures arise from technical issues with the product - consumer satisfaction plays an important role
- ▶ Australian Consumer Laws provide some protection
  - ▶ Effective warranties drive market solutions to a lot of the potential problems
  - ▶ However, they are not failure-proof!
- ▶ None of the international jurisdictions that we reviewed have fully addressed the potential issues that we identified
- ▶ Technical requirements offer good protection against known failure modes
  - ▶ Some refinement is needed
  - ▶ Ongoing monitoring is important to inform future requirements



# Recommendations (to policymakers and the broader industry)

1. Extend the operating life of products:
  - ensure sufficient resources to service warranties
  - encourage routine servicing
2. Increase engagement between suppliers and policymakers
3. Make further efforts to reduce information asymmetry for consumers
  - Requiring minimum co-payments;
  - Highlighting real cost implications of the purchase decision; and
  - Providing objective information about noise emissions



# Recommendations (to policymakers and the broader industry)

## 4. Consider technical aspects of the design requirements:

- Relationship between thermal capacity of compressors and product longevity
- Use of resistance elements and user modification of control settings
- IP ratings for component housings
- Ensuring that products are capable of withstanding pressure fluctuations
- Ensure that other requirements implied by the Australian Standards are addressed
- Continue monitoring for issues relating to component durability

## 5. Advocate for international consistency in product labelling



Thank You!



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