



Dear ASBEC team,

AIRAH appreciates the opportunity to provide input on the ASBEC discussion paper, *Rapid and Least Cost Decarbonisation of Building Operations*.

As well as seeking input from our members for our submission, we have promoted the discussion paper through our newsletters, online news site, and social media. We see this as an important project in the wider effort to meet our net-zero commitments, and harness the opportunities in the built environment for reducing emissions. AIRAH recognises – and the paper confirms – that HVAC&R has a leading role to play here.

With thanks to AIRAH's Renewable Heating and Cooling Special Technical Group, we offer the following comments on the paper:

- AIRAH, with support of ARENA, carried out a study to identify opportunities for improving uptake of solar use in buildings. This report has been developed after industry and market consultation. The study has identified various near-term and medium-term opportunities. We urge the discussion paper authors to consider the recommendations provided as part of the report:
https://www.airah.org.au/Content_Files/Special-Technical-Groups/Solar/060918_REPORT_SHCRoadmap_FINAL_180830.pdf
- With electrification and high uptake of solar PV, we are soon going to see high electrical use during winter periods. More importantly, they won't coincide with renewable generation. The STG considers this to be one of the biggest challenges. Europe has been addressing this challenge through use of fifth-generation district/precinct level heating systems and integrating them with renewable energy such as solar and thermal storage. The discussion paper should identify opportunities for precinct level heating systems and their potential for Australian cities, incorporating this technology in new developments where viability exists.
- Solar heat is the most energy efficient way of transferring solar energy to heat (for hot water and heating). Australia has been a pioneer in tech development in the early days. Various studies (including the [PUSCH study](#)) have identified ways to improve the uptake of solar heat for commercial and residential applications – a combination of policy and skills development is required. This should be considered as part of the energy source mix while evaluating various technology options for decarbonising the buildings.
- Use of other distributed renewable cooling and heating solutions like geothermal heat pump technologies and their role in reducing the stress on the electrical grid could be considered in the study.

Once again, we applaud ASBEC for driving this initiative. AIRAH looks forward to supporting the next steps.

Regards,

A handwritten signature in black ink, which appears to read "Anthony Gleeson". The signature is written in a cursive, flowing style.

Tony Gleeson, M.AIRAH
Chief Executive
AIRAH