



RHI Team  
Department of Energy and Climate Change  
Area 4A  
3 Whitehall Place  
London, SW1A 2AW

bre

### Transpired Solar Collectors

BRE has been investigating how transpired solar collectors can be integrated into the SBEM and SAP regulatory building energy and carbon calculation tools. In the course of this work, we have assessed the evidence for the performance of such systems. In particular we have examined the theoretical analyses, performance measurements and field trial results produced by the International Energy Agency.

<sup>1</sup>We have also examined the way the technology is handled in the National Research Council of Canada's RETScreen software <sup>2</sup> – this is based on the IEA work. From this, and from the results of incorporating the IEA model into SBEM, we believe that, in the appropriate circumstances, it can significantly reduce heating needs. The scale of reduction in any specific case will depend on details of the collector design and operation, and on the design and use of the building and its heating system.

Paul Davidson

Director, Sustainable Energy Group  
BRE

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<sup>1</sup> Low cost, High Performance Solar Air-heating Systems using Perforated Absorbers, IEA Solar Heating and Cooling Report SHC.T14.Air.1 September 1999.

<sup>2</sup> <http://www.retscreen.net/ang/home.php>