# Hydrogen I Hybrids I Heat Pumps



To see how these combinations can impact your projects carbon footprint contact us today on **0300 373 0660** or scan the QR code.



Rinnai can offer the complete package, designed with capital expenditure, operational expenditure and carbon reductions in mind. We can supply the complete solution.

Simply scan the QR code and ask us a question!











# Rinnai



**Accredited CPDs** 

# Rinnai

# The Easy Choice for Commercial Hot water solutions

Over our 100-year history of innovation, we've proven our commitment to quality, safety, and support is behind everything we do. We make it easy to pick the right water heating solution to support the needs of your business and customers.

We are bringing the Rinnai mission of "creating a healthier way of living" to life, in the form of our H3 solutions initiative. So, whether you are looking at natural gas to Hydrogen, Hybrid gas, electric, or all-electric heating and hot water systems, we have a market-leading solution for you.

Backed with design support, extensive warranties and carbon calculation services in the form of our innovative "Greenbook" We are here to support you on our quest to "create a healthier way of living"

Creating a healthier way of living is our core mission statement, which underlines how we act and apply innovation to our products and working processes. We are striving to develop products that save energy using ecological gases. In the case of our heat pump range, we target the elimination of leakages and the use of environmentally friendly refrigerants to reduce global warming potential.

We are investing in the R&D of heating systems with heat pumps and hybrid systems so that electron-based technology can easily integrate with our extensive range of molecule-based products whilst continuing to explore new and replacement refrigerant gas.

#### H3 – The new element in water heating

We at **Rinnai** recognise the need to improve energy efficiency across the existing suite of UK commercial buildings along with the growing low carbon requirements of new builds. Therefore increasing efficiency, reducing carbon emissions and incorporating renewable energy are key to our continued technological advances.

The deployment of heat pump technology along with our Hybrid and Hydrogen blend ready or BioLPG ready solutions will serve to, improve energy efficiency, and reduce carbon.

For more details on our complete range of low carbon solutions, visit www.rinnaiuk.com



# List of accredited Rinnai CPDs

## Hydrogen gas and blending as a means of decarbonising the UK energy network

This CPD shows the significant national role and the subsequent impact that hydrogen can have in a societal and commercial context. It shows the UK government legislation that is driving the hydrogen economy. The efforts are mainly focused on the infrastructure, production, and current hydrogen deployment in the UK.

#### **Commercial heat pump design**

This CPD shows how heat pumps can be best applied to small commercial applications. The guide deals with establishing demand and temperature, the level of centralisation and building considerations for heat pump applications. It also shows some best practices for designing and optimising heat pump systems. The cost and carbon are crucial project drivers; a case study of a health centre domestic hot water system is shown.

## Carbon & economic comparison for hot water systems using heat pumps, direct electric and hydrogen

This study compares three upcoming low-carbon systems: gas, hybrid, and fully electric. The analysis was conducted to show carbon & cost savings that can be achieved using these systems. The study is performed for two types of commercial buildings, a typical fast-food restaurant and a gym health suite. This presentation shows each system's energy calculation, detailed schematics, and running and capital costs.

### Carbon & economic benefits of zero storage in hot water systems

This CPD is based on the instantaneous water heating approach. In DHW systems, energy waste can occur in hot water storage. This study shows the savings that can be achieved using instantaneous heating, therefore minimising hot storage. The study uses two commercial notions of buildings to deliver the potential savings of the system.











### **BioLPG in water heating applications**

This presentation highlights the benefits of transitioning from carbon-rich fuel sources, namely Oil and, to a lesser extent, LPG, to low carbon BioLPG. The CPD also establishes the savings in carbon achievable from this transition.

#### Low temperature domestic hot water system powered by hydrogen

The CPD is focused on low-temperature systems powered by advanced hot water appliances. The CPD considers the impact of low-temperature hot water in today's environment and then investigates the impact that Hydrogen blends will have in the future. Practical examples are utilised to explain the benefits of such systems further.



**CIBSE APPROVI** 

## **Continuous Flow Hot Water System Design**

This CPD details how to size a continuous system. It calculates the heat energy required for commercial hot water application. It covers working principles, system design, schematics and ACOPL8.

### **ACOP L8 & Continuous Flow**

This CPD is focused on ACOP L8. It shows the risk involved with storing hot water. This study shows how to minimise the risk using a continuous instantaneous flow system.

## Analysing the Seasonal Performance Factor (SPF) of Heat Pump Systems for Commercial Domestic Hot Water applications

This CPD study focuses on providing the building service industry with a more accurate performance measurement than the SCOP, and the COP, being the SPF. The presentation introduces and applies the SPF methodology to a case study to showcase the reality of heat pump systems supplying solely DHW. The goal is to raise awareness for SPF and improve the system congruity.



**CIBSE APPROVE** 





**1 Hour Sessions Available** 



**Book a course today!**