



COMMUNITY  
BUILDINGS  
HEATING SOLUTIONS



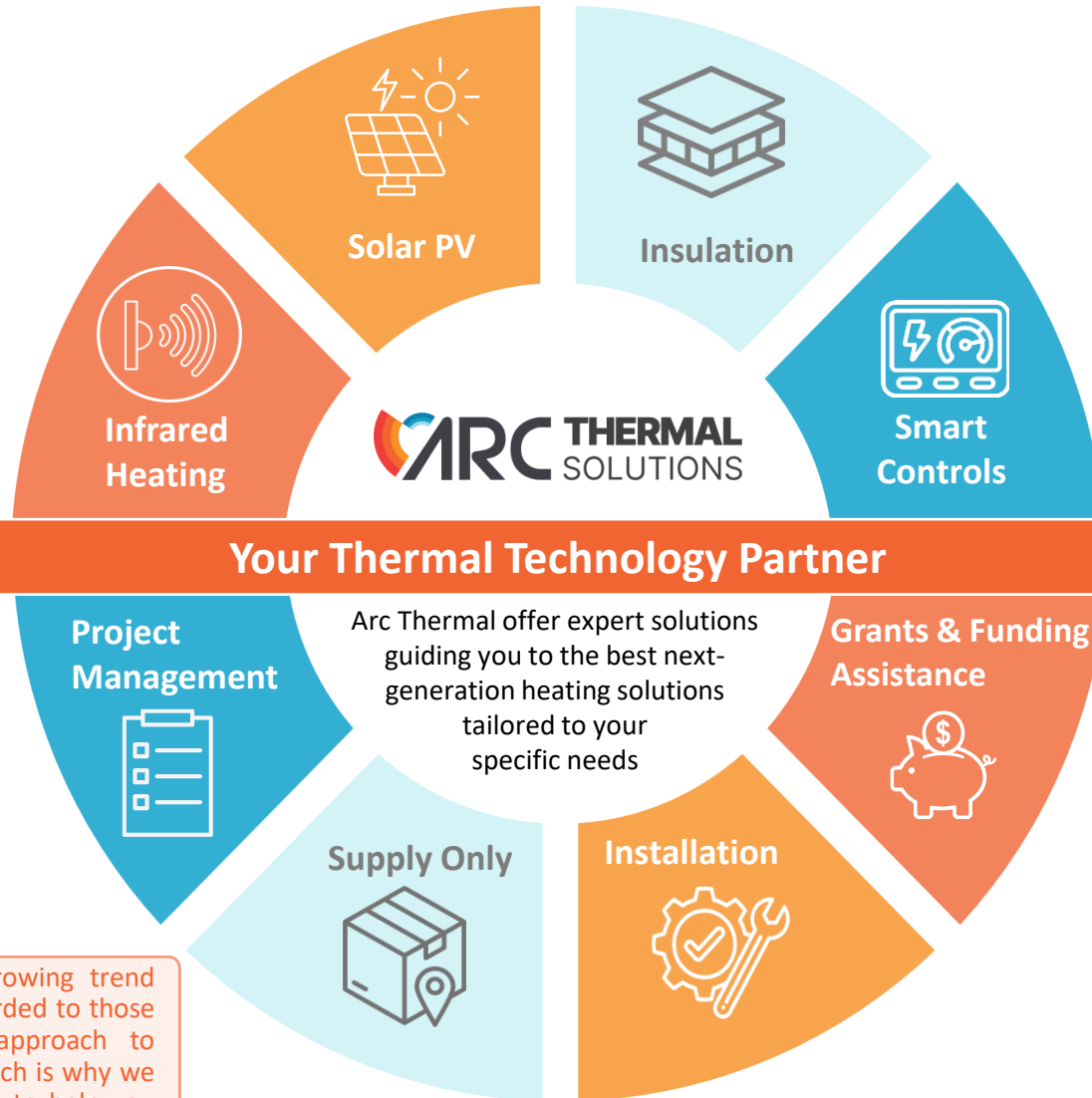
### A Commitment to Excellence from Start to Finish

At ARC, we do more than supply high-quality thermal solutions, we build lasting partnerships. From the initial consultation to installation and after sales support, we work alongside our customers and first-class installation partners every step of the way. We understand that choosing the right heating or cooling system is a lifestyle choice and long-term investment, which is why we only offer products that deliver outstanding comfort, performance, energy efficiency, and durability.

Our solutions are built to last, engineered with precision, and designed to perform in even the most demanding environments. Our long-term partnerships with expert manufacturers and supply chain specialists allow us to deliver multi-technology thermal solutions for buildings. We take a holistic approach to ensure the most appropriate and cost-effective technologies are used to achieve immediate and long-term carbon reduction goals.

Closely working with leading manufacturers like ETHERMA ensures we know their products as if they were our own. This means we are 100% confident they meet the high standards we expect, because we don't compromise on quality, and neither should you.

More than just a supplier, we're your partner in comfort and efficiency, providing expert guidance, seamless installation and dedicated after sales support. When you choose ARC, you're choosing reliability, expertise, and a commitment to working together from start to finish.

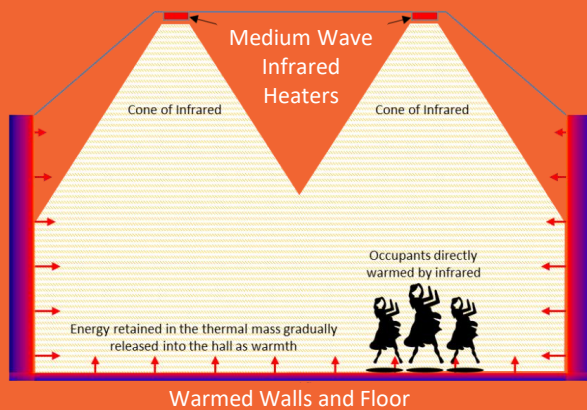


There appears to be a growing trend towards funding being awarded to those who provide a holistic approach to building improvements, which is why we offer a combined solution - to help you achieve the funding your community building requires.

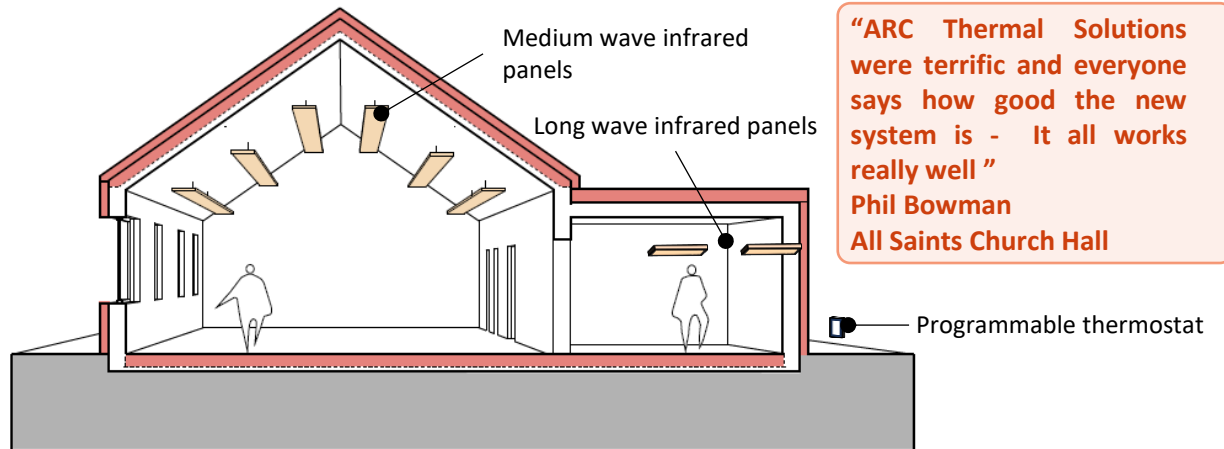


# INFRARED HEATING

Infrared heating uses radiant heat to warm people and objects directly, rather than heating the air. It's similar to the way the sun heats the earth. When infrared warmth hits our skin, it instantly releases a pleasant sensation of heat, and it is therefore also called "radiant warmth". Infrared heating is based on this principle of direct warmth and provides particularly efficient heat, saving on energy costs and reducing the generation of dust and allergens.



## Turning heating on its head with Infrared



**"ARC Thermal Solutions were terrific and everyone says how good the new system is - It all works really well"**  
**Phil Bowman**  
**All Saints Church Hall**

Example village hall now insulated, with infrared panels suspended from the ceiling

Infrared heating offers a potential solution for village halls and community buildings seeking efficient and adaptable warmth.

Unlike traditional convection systems, which heat the air, infrared heaters radiate warmth directly to people and objects. This results in a faster perceived warmth, which can be beneficial for halls with intermittent use.

Zonal control allows for temperature adjustments to suit different activities and occupancy levels. Programmable timers can help manage energy consumption. Infrared heating avoids heat stratification, a common issue in spaces with high ceilings.

This technology offers cost-effective and comfortable heating for village hall and community building environments.



# Turning heating on its head with Infrared

For village halls and community buildings facing varied usage and high ceilings, infrared heating is a practical solution.

Suspending heaters lower optimizes direct warmth, while zonal control and timers ensure efficiency.

Easy installation, minimal maintenance and compatibility with renewable energy sources, such as solar PV systems, make it a compelling alternative to traditional systems.

Modern, silent and zero-light units, including slimline panels and mirrors for smaller rooms, provide versatile comfort, especially when combined with good insulation for reduced running costs.



“Thank you for the prompt and efficient handling of our village hall infrared heating project. We are very pleased with it. Thanks again and best wishes to you and the team at ARC Thermal.”

Denis Moore - Rendham Village Hall, Suffolk



Low investment costs backed by grant funding



Full area heating or zone heating



Improve energy efficiency



Smart controls to manage your energy consumption



Keep heaters out of harms way, by ceiling mounting or suspension



Maintenance free



Made in Austria



## INFRARED HEATING

Efficiency and build-quality has a long-term effect on energy consumption/cost of heating and the overall life expectancy of the heating system. It is the same principle as investing in quality LED lighting.

Our products from ETHERMA made in Austria are innovative technical devices and designed to make optimum use of the highly efficient infrared radiation as a source of heat. This is why we have the right ingenious warmth solution for every application.

“We love the new heating system and I think that it is brilliant. Everyone keeps warm now. The warmth generated by the ARC Thermal units feels just like the sun, first thing in the morning, when you’re camping. I can programme everything via the app now!”

Colin Karslake,  
Group Scout Leader, Basingstoke Air Scouts



# SOLAR PV

We're proud to partner with companies like DMB Solar who have been experts in solar solutions since the very beginning, with over 30 years experience in the field.

Their experts conduct and provide thorough assessments of the energy needs and goals and design a customised energy solution bespoke to your wants and needs.

They look at the radiance levels over a 10-year span, to accurately predict what can be achieved, specific to your area.

The solution is low maintenance, requiring only regular cleaning and annual maintenance. Their systems are built to last, their package is tailored to you, and their experience second to none.



Scan the QR code to watch our latest installation



## Solution: Solar Photovoltaic System DMB | SOLAR



### Save money & protect our planet

Utilise clean, renewable energy to offset your carbon footprint, lower your energy demand from fossil fuels, and reduce your pollution



### Achieve a healthy ROI

A typical commercial solar panel system will provide electricity for more than 25 years, achieve returns of more than 12% per annum, and pay back installation costs within 6-8 years



### Significantly reduce overheads

Generate and store free, clean energy on-site and improve your bottom line with up to 100% savings on your electricity bills



### Secure your future energy

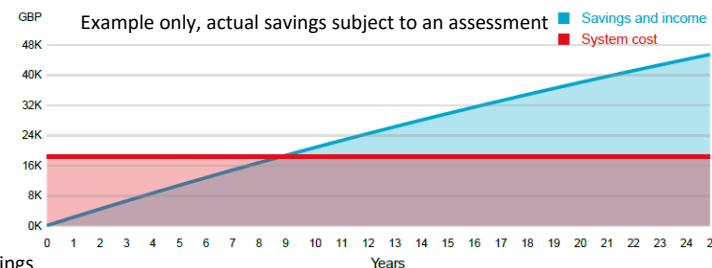
Pre-purchase electricity at a fixed unit price, forecast your long-term energy costs, and protect your business against future increases in utility prices



### Protection from power shortages

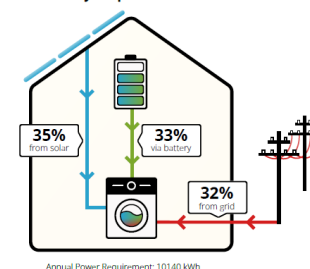
Generate and store your own energy, reduce reliance on the National Grid and protect yourself from potential rationing and brownouts

|                                           |
|-------------------------------------------|
| Your current electricity supply produces  |
| <b>1,699</b> kg CO <sub>2</sub> each year |
| 70% will be supplied by solar, saving     |
| <b>1,196</b> kg CO <sub>2</sub> each year |
| 4,510 kWh will be exported, saving        |
| <b>958</b> kg CO <sub>2</sub> each year   |
| Total savings                             |
| <b>2,153</b> kg CO <sub>2</sub> each year |



Example only, actual savings subject to an assessment

Where will your power come from?



# Comprehensive Service Offering



## Product Advice & Sales

Sharing our experience and product knowledge to ensure you get the best and most appropriate product for your application



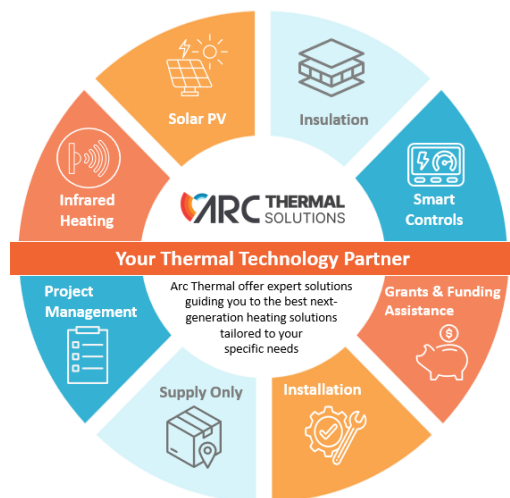
## Design, Specification & Supply

We offer professional consultations to help you find the most appropriate, efficient and cost-effective thermal solutions for the building



## Turnkey Solution

We offer a full turnkey solution through our carefully selected ARC Partners. This enables us to confidently deliver every aspect of the project to the highest professional standards.



## Full Project Management

We adopt the Office of Government Commerce industry accepted best practice Managing Successful Programmes (MSP) principles which embrace Prince2 project management methodology.



## Grants and Funding Assistance

We offer guidance and eligibility recommendations to help to secure energy efficiency grants, covering 25-40% of project costs (£1,000-£10,000) and maximizing emissions reductions.

# COMPREHENSIVE SERVICE OFFERING

Our range of services will ensure you get the right level of support; whether you are purchasing a product or looking for a full turnkey solution, we have you covered.

“The infrared heating in Credenhill Hall has been a great success. Our hall heats much quicker and to a more comfortable temperature than ever before. On the back of this, we have been receiving many new users of the space.”

Paul Oliver - Secretary  
Credenhill Community Hall



## CASE STUDY

# INFRARED HEATING SOLUTION FOR HISTORIC BUILDINGS

### Berrynarbor Manor Hall | Devon, UK

#### THE EXISTING SITUATION

The historic hall, an extension of a 15th-century manor, struggles with an inefficient heating setup. Wasteful electric heaters and a poorly controlled central heating system, plagued by heat loss due to long pipework, result in inadequate warmth.

#### THE CHALLENGE

The committee sought a rapid and controllable heating solution for the historic hall, addressing the inefficiencies of the existing system. They needed a system that could quickly reach a comfortable temperature, allowing for on-demand heating and preventing energy waste. Accurate temperature control was crucial to accommodate diverse activities, and a zoning system was required to address the high-pitched roof's heat loss and to separately heat the toilets and storage area at lower temperatures.

#### THE SOLUTION

The solution implemented infrared heating to address the hall's heating challenges. Medium-wave ETHERMA EZ heaters were chosen for the main hall due to their ability to directly warm occupants, enabling lower thermostat settings and energy savings. Long-wave LAVA BASIC-DM panels were used in the lower-ceilinged toilets and storage areas.

Infrared heating's direct warmth reduced the temperature difference between the floor and ceiling, minimizing heat loss through the high roof. This method efficiently utilized the heat absorbed by thermal masses like floors and walls.

Separate heating zones, each with programmable, radio-controlled thermostats, were established for precise temperature management, reducing energy waste and improving comfort. The radio-controlled thermostats also simplified installation by eliminating the need for new cable routes.



#### PRODUCT SELECTION

##### ETHERMA EZ:

Hygienic, dark emitter, medium-wave infrared, durable, easy install

##### LAVA BASIC-DM:

High output, long-wave infrared, comfortable, efficient warmth, ceiling mounting





## CASE STUDY

# INFRARED VILLAGE HALL HEATING

### Denham Village Hall | Buckinghamshire, UK



#### THE EXISTING SITUATION

Denham Village Memorial Hall, built in 1921, had a poorly insulated structure and an outdated, inefficient gas heating system. This led to uneven temperatures and high energy costs. The committee aimed to replace it with a modern, efficient, and controllable solution.

#### THE CHALLENGE

The multi-use village hall needed an easily controlled, adaptable, and low-maintenance heating system. However, the existing convection system wasted energy by overheating the ceiling, struggled to evenly heat the large space, and caused uncomfortable drafts and significant temperature differences, leading to high heating costs and poor user comfort.



#### THE SOLUTION

To address the hall's heating issues, ETHERMA infrared heating was installed, using medium-wave heaters for the high-ceiling main hall and long-wave panels for other rooms. Ceiling mounting maximized space and prevented damage. Unlike the previous system, infrared directly warmed occupants, providing rapid, comfortable heating and eliminating temperature stratification, potentially reducing heat loss by 30%. The system was divided into five independently controlled zones, managed remotely via a wireless automation system, optimizing energy use and user comfort.



The hall was fitted with ETHERMA infrared heaters: 8no. 2kW double panels in the main hall, 4no 750W LAVA BASIC-DM panels in the meeting room, and various 500W and 350W LAVA BASIC-DM panels in other areas. Each zone is managed by a wall-mounted thermostat and App-based interface, enabling full off-site control.



# QUALITY AND SUSTAINABILITY

We offer more than just high-quality products; we champion a holistic approach to excellence.

Our manufacturers share our unwavering dedication to sustainability and quality, ensuring every step of our process reflects our shared values and commitment to a responsible future.

Our infrared heating products not only meet the rigorous EIHA quality standard and comply with the ECODESIGN Directive, but we are also actively collaborating with our partners to achieve PFAS-free production.

We provide a comprehensive sustainable heating solution, encompassing eco-friendly designs, low-carbon operation and the supply of long-lasting, durable products compatible with renewable energy sources.

## Quality assured & sustainable as standard

### Quality Assurance

EIHA is the European Quality Label for Infrared Heating. EIHA accreditation signifies that a product has met stringent quality, safety and efficiency requirements, providing consumers with a reliable mark of superior quality. To have your products recognised by the EIHA, they must qualify on the following:

- ✚ **High Radiation Efficiency:** Must convert at least 40% of electrical energy into radiant heat (IEC 60675-3)
- ✚ **CE Certification:** Must meet European safety, environmental, and quality standards (EN 60335-1, EN 60335-2-30, EMC, RoHS, WEEE).
- ✚ **Annual Production Monitoring:** Consistent quality assurance through independent testing.
- ✚ **Eco-design Directive Compliance:** Minimum 38% efficiency for energy efficiency and environmental compatibility (2009/125/EC).



### The ECODESIGN Directive

**The Goal** - Minimisation of environmental pollution during the entire product life cycle

**Application** - Placing on the market and the putting into operation of heaters for indoor use (up to 50 KW)

**Requirements:**

- 1) **Energy efficiency requirements** of minimum energy efficiency (Cal. seasonal energy efficiency) & maximum energy losses (0,5Wto 3W)
- 2) **Control / regulation** - Electronic temperature control and Weekly program / timer
- 3) **Additional functions for control systems**, such as presence detection, open window detection, adaptive start function
- 4) **End user information** - Tables with consumption values and properties, information on requirements and functions of control systems, control codes
- 5) **Availability of spare parts** - Hardware: within 10 working days, Software: at least 10 years
- 6) **Repair and maintenance** - It must be possible to provide customers with the relevant information

### Sustainable Heating Solutions

We prioritise sustainability by offering heating solutions that reduce fossil fuel reliance and support renewable energy.

- ✚ **Eco-Friendly:** Infrared heating minimises emissions
- ✚ **Low Carbon:** Energy-efficient systems for residential and commercial targets
- ✚ **Durable:** Long-lasting products reduce waste.
- ✚ **Renewable Integration:** Compatible with solar and other renewable sources.
- ✚ **PFAS-Free:** Committed to products without harmful PFAS chemicals.



# Curious about the numbers? Let's take a look...

To generate a precise and valuable, no-obligation quote for your village hall or community building, we'll need to gather some essential information.

Here's what we'll be looking for:

A **site/floor plan** or even a sketch with **dimensions (incl. ceiling heights)** of the hall and/or rooms to be heated.

Information on the **building structure (incl. build date)** and details of any **insulation present**.

**Internal and external pictures** to provide us with as much detail as possible about the **building fabric**, including ceilings, walls, windows, doors and floors, fixtures and fittings such as lights etc.

**The electric Supply** (single or 3-phase) – **the location** (on the site plan) and **pictures of the inside of the distribution board** showing details of the contactors and cables going into the board, including the incomer fuses and a **copy of your most current electrical condition report** if available.

Any **information on the existing heating**, such as pictures of the heaters and power ratings (kW).

Any further information about **planned improvements** and whether there is **internet** in the hall.

**ARC THERMAL SOLUTIONS**

Your Thermal Technology Partner



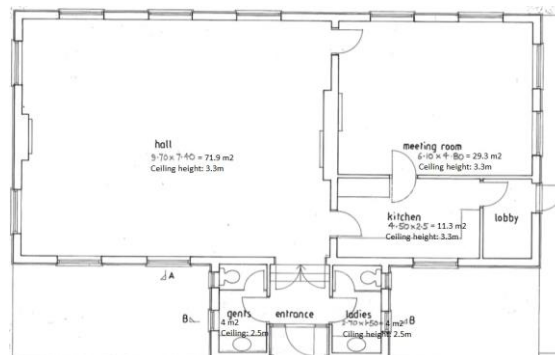
01923 889480



[sales@arcthermal.co.uk](mailto:sales@arcthermal.co.uk)



ARC Thermal offers expert solutions, guiding you to the best next-generation heating solutions for your building.





**ARC THERMAL SOLUTIONS**

[www.arcthermal.co.uk](http://www.arcthermal.co.uk)

