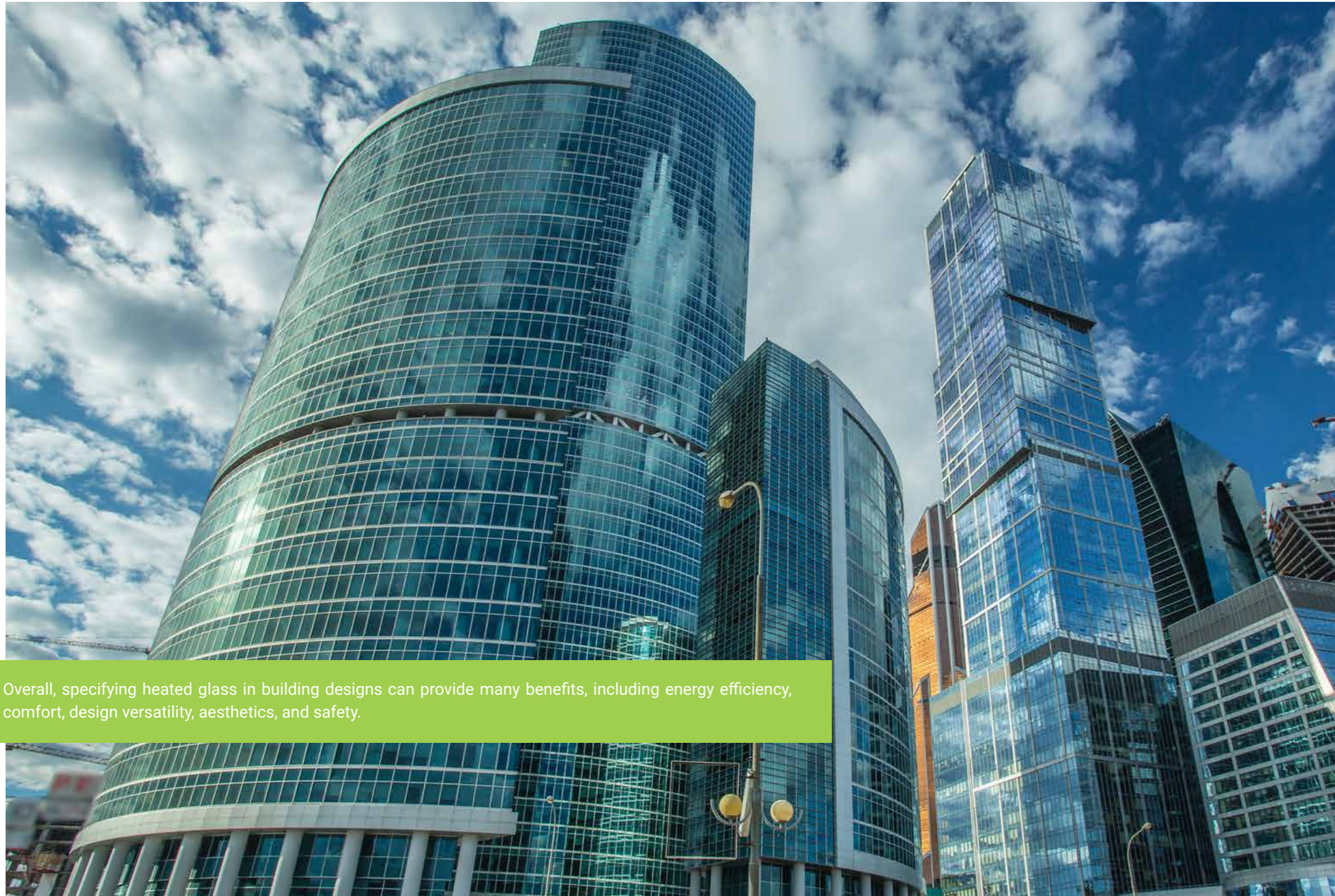




GLASS AFTERCARE

Heated Glass

Modernised by cutting-edge technologies



Overall, specifying heated glass in building designs can provide many benefits, including energy efficiency, comfort, design versatility, aesthetics, and safety.

Transform your space with heated glazing and experience an endless array of benefits.

Glass Aftercare supply electrically heated glass products to commercial and domestic properties in London and across the UK.

Our team of expert engineers guarantee an optimal heated glass solution, assuring maximum comfort for your premises. Trust us to bring about a revolutionary transformation to your property.

Our experts will collaborate with architects, engineers, prime construction contractors, all of whom reap the rewards of our active and wide-ranging project experience and mastery in glass.

By engaging our services, customers can rest assured that the entire process from procurement to delivery will be smooth and worry-free.

Furthermore, you can trust that you will receive a premium quality product, within budget and on schedule.



Enjoy a naturally warm space, making the room inviting and comfortable.

And of course, you can't forget about energy savings, as you won't need to use as much heat from other sources.

Heated glazing can be incorporated into insulating units designed to provide noise reduction, solar control and UV filtering.

Helping to keep a property warmer in the winter and cooler in the summer. This can help reduce energy costs and make the property more comfortable.

Heated glass can also reduce the risk of condensation, keeping the windows clear and allowing for an unobstructed view of the outdoors.

Eradicated visual and maintenance problems associated with condensation.

Warm windows allow more effective use of the floorspace: no more radiators needed to stop those chilly down-draughts.

It allows a better design of living or working space internally and due to providing more comfort is better for your wellbeing.

Energy saving and lower power consumptions makes heated glass the ideal sustainable solution to your heating needs.



Energy Efficiency

By specifying heated glass, you can help to reduce the amount of energy needed to heat a building and lower the building's carbon footprint.



Comfort

Comfort: Heated glass can provide a comfortable environment for the building's occupants by preventing condensation and frost from forming on the windows, which can make the space damp and uncomfortable.



Design Versatility

Heated glass can also be used in a variety of design applications such as skylights, canopies, and other architectural features. It can also be used in all-glass facades to provide continuous, uninterrupted views while maintaining thermal comfort.



Aesthetics

Heated glass can also enhance the appearance of a building by keeping the windows clear and free of frost, which can be visually appealing.



Durability

Heated glass can also help to increase the durability of a building by preventing the formation of ice on the exterior of the building, which can lead to damage from freezing and thawing.



Safety

Heated glass can also help to prevent the formation of ice on the exterior of the building, which can be a safety hazard for pedestrians and vehicles.



Cost Saving

The use of heated glass can save on energy costs by reducing the amount of energy needed to heat a building, and also by reducing the amount of wear and tear on the building's HVAC system.



Convenience

Some systems can be controlled through smart home devices or with a smartphone app, which allows you to monitor and adjust the system as needed.

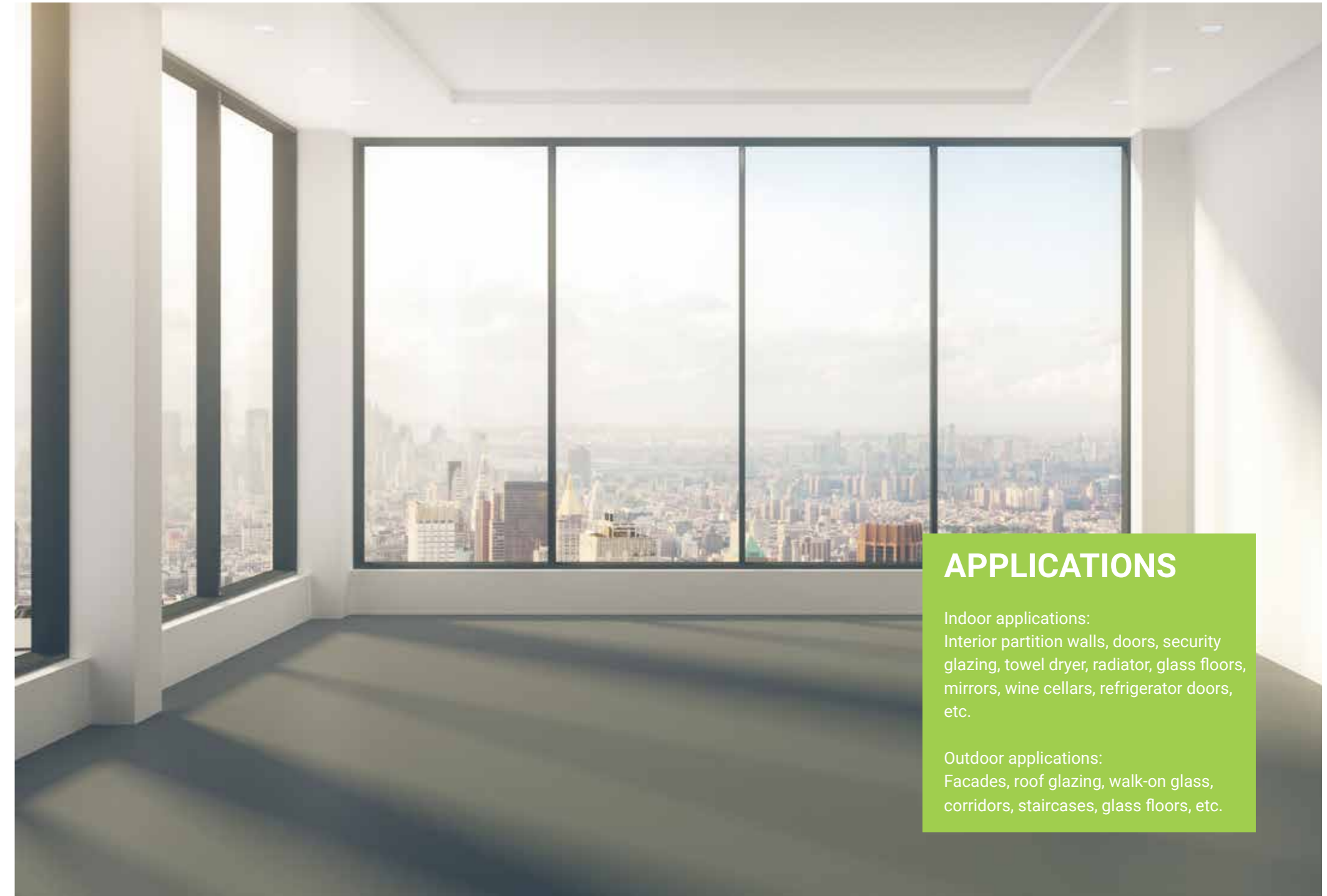
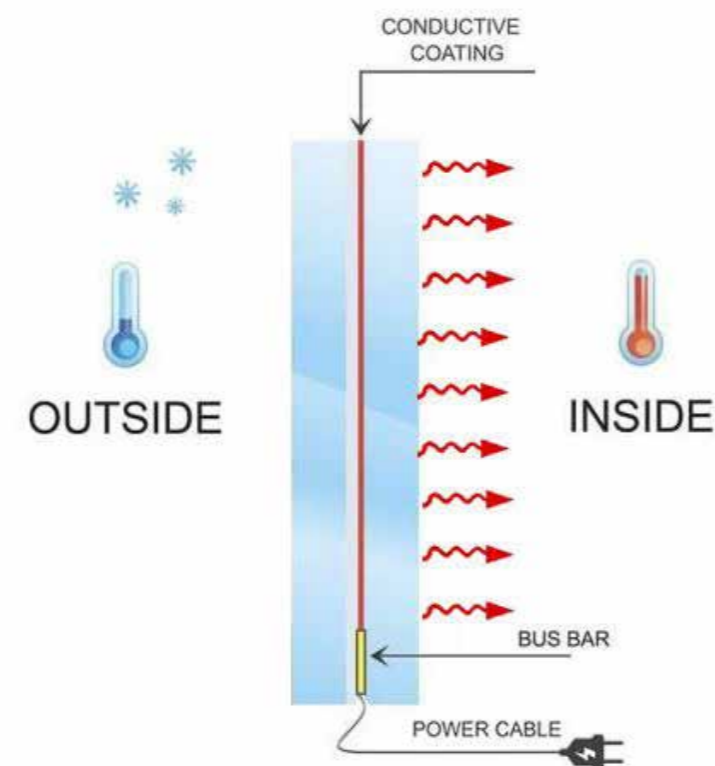
HeatGlaze

HeatGlaze is an innovative, integrated and invisible, electrically heated glass solution, allowing for enhanced visual and thermal indoor comfort.

Manufactured using a special type of glass, it features a glass surface to which a transparent electrically conductive coating has been applied. An electric current passes through cables and bus bars on this coating, thus generating heat and causing the glass to begin to radiate heat.

HeatGlaze resolves structural problems of maintenance and visibility linked to condensation or snow. It is available as double or triple glazing, as well as laminated safety glass (for indoor applications).

The intensity of the heat can differ; it depends on the final application.



APPLICATIONS

Indoor applications:
Interior partition walls, doors, security glazing, towel dryer, radiator, glass floors, mirrors, wine cellars, refrigerator doors, etc.

Outdoor applications:
Facades, roof glazing, walk-on glass, corridors, staircases, glass floors, etc.

Benefits of HeatGlaze

HeatGlaze offers you better comfort thanks to stable and radiant heating, which does not dry out the air.

Increased provision of natural light makes the environment brighter and better for wellbeing and you can optimise on space as a room can be furnished effectively, right up to the glass.

The glass is easy to clean with low maintenance, it can even be designed to incorporate sand blasting or digital printing for example.

Due to low power consumption and radiant technology, this solution can save energy, and have a positive impact on the environment.

Conformity

Heatglaze complies to the following standards:

- CE MARK
- EN 1279 - Double glazing unit
- EN 1096 - Laminated Glass
- EN 12150 - Safety glazing, heat strengthened glass
- EN 14449 - Safety glazing, laminated glass and structural glazing
- EN 12600 - Pendular test
- UL certificate - File no. E531629



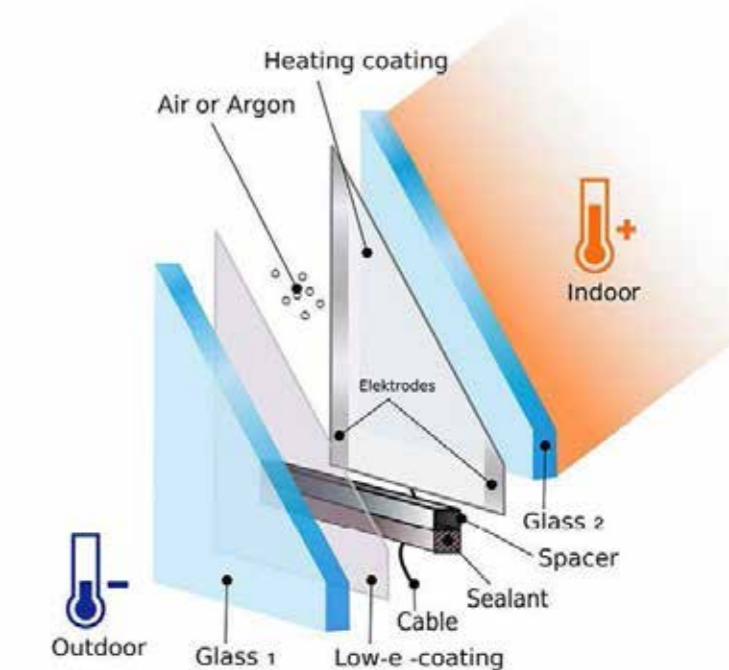
In the diagram, we have two tempered glass panes, each with a low-E coating.

Electrode strips running along the edges of the inner glass lead electric current from a highly flexible double-insulated cable to the low-E coating.

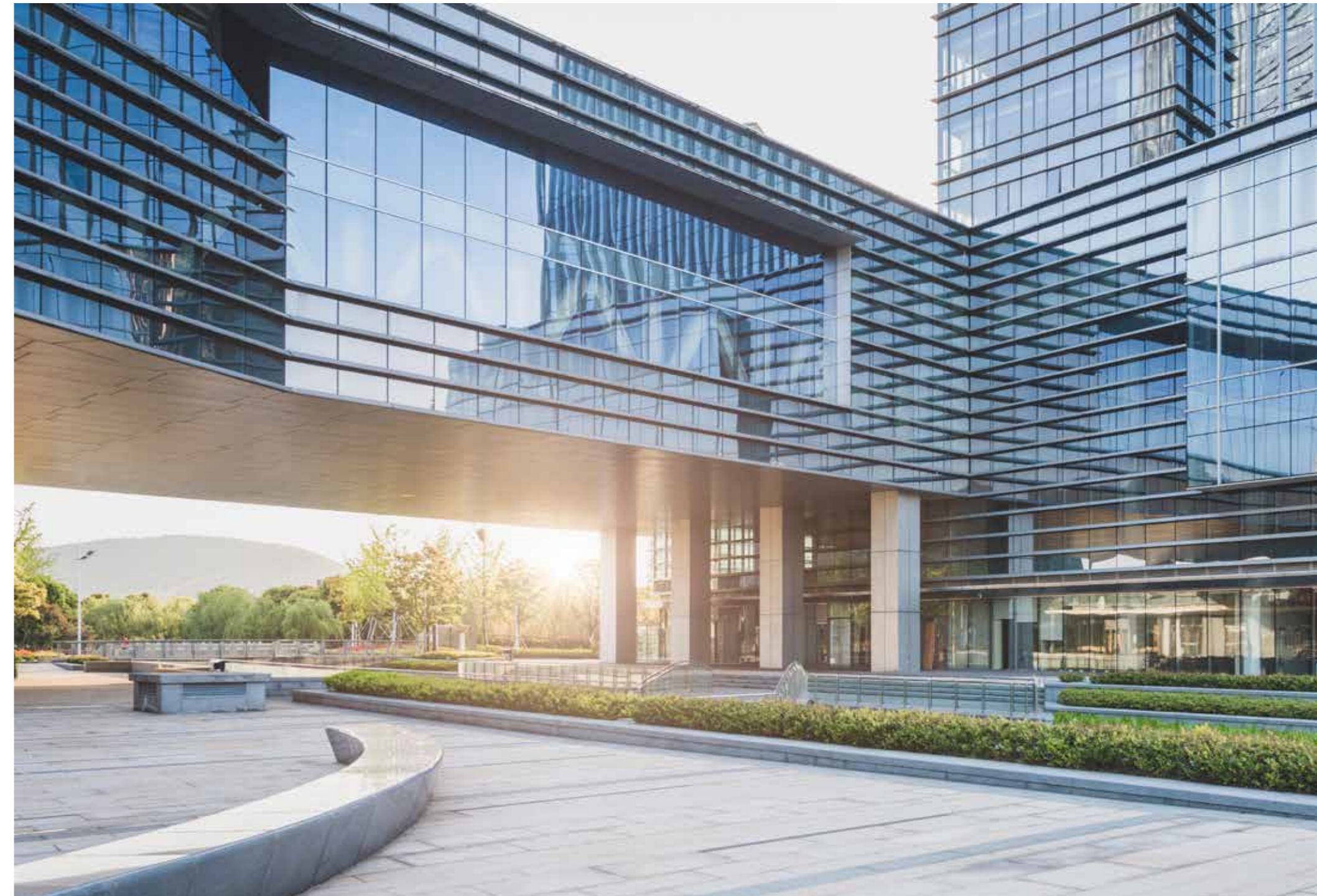
The low-E coating acts as a uniform resistance element, warming glass evenly all across the pane. The second low-E coating on the exterior glass reflects escaping heat back indoors.

The Technical Research concluded that over 90 percent of heat can be directed indoors, minimizing heat loss and your carbon footprint.

This makes Electrically Heated Glass superior in energy efficiency to any other comparable technology.



- Minimum/maximum size 300 mm x 500 mm / 3.200 mm x 8.000 mm
- Colour Wide range of colour laminating films, coloured glass
- Interlayer PVB, SentryGlas®, Saflex® DG 41, PU, PDLC privacy film
- Shape Rectangle, square, trapezoid, round, oval, triangle
Holes, notches possible
HST possible
Other processings screen printing, sandblasting, enameling
- Safety Composed of tempered and laminated glass in accordance with CE, EN 12150, EN 12543



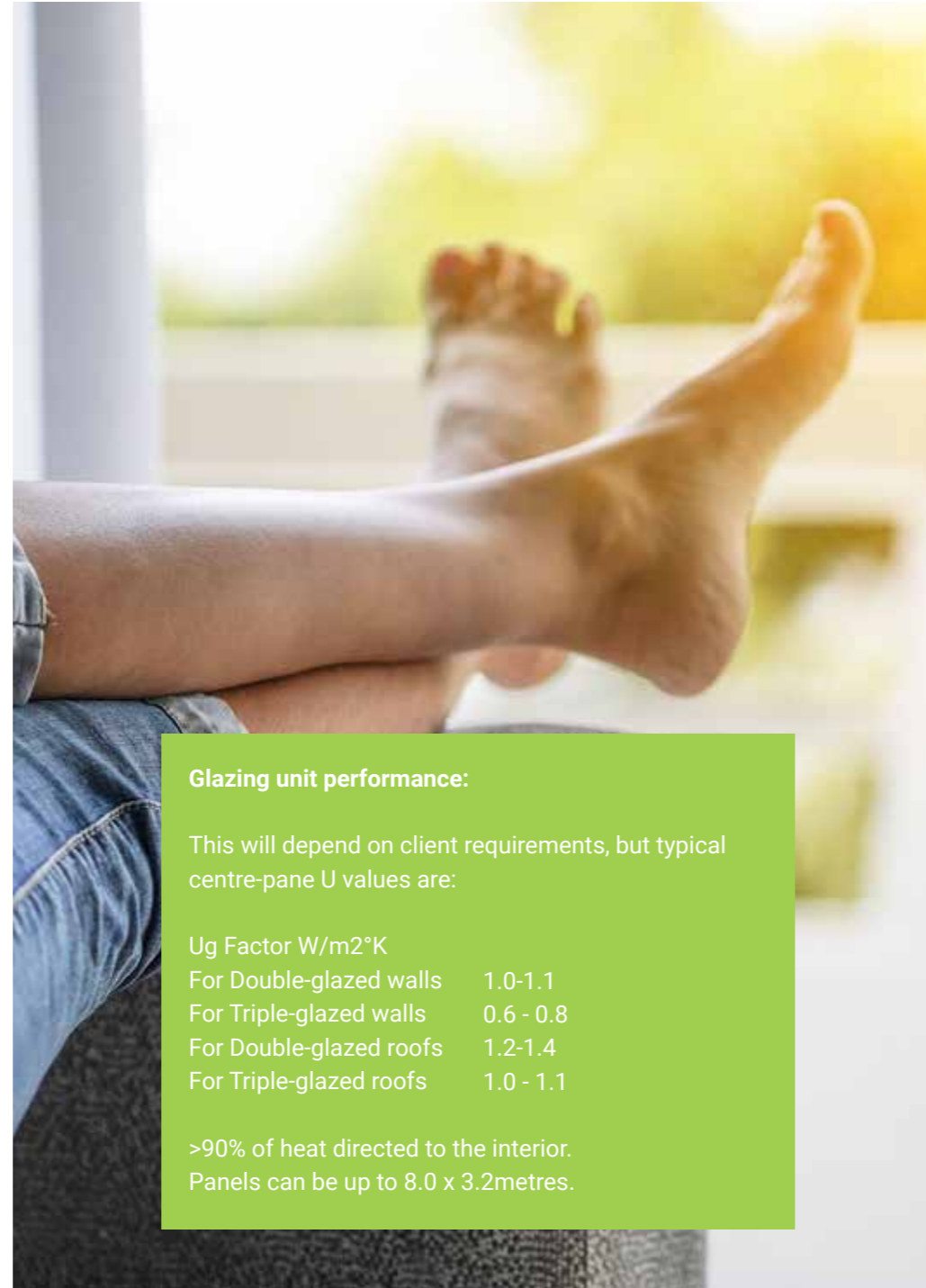
Comfort Heating

Electrically Heated Glass prevents the feeling of cold drafts when close to traditional windows or glass façades - a phenomenon referred to as the “cold wall effect”. This is what makes us reach for the room thermostat and turn up the air temperature, sometimes to unhealthy levels above 24°C.

The cold wall effect is caused by two factors:

1 - air close to the glass is cooler than the ambient air in the room; and although heat loss can be reduced by double or triple glazing with high performance coatings, it is still noticeable. Cold air descends, moves across the floor and causes a sensation of cold drafts.

2 - human skin temperature is between 33 and 37°C (c92-98°F), body temperature being a little higher and conventionally normalised as 98.6°F (37°C). The body radiates heat to any surface below this temperature so standing close to these surfaces can make the skin feel cold.



Glazing unit performance:

This will depend on client requirements, but typical centre-pane U values are:

| Ug Factor W/m ² *K | |
|-------------------------------|-----------|
| For Double-glazed walls | 1.0-1.1 |
| For Triple-glazed walls | 0.6 - 0.8 |
| For Double-glazed roofs | 1.2-1.4 |
| For Triple-glazed roofs | 1.0 - 1.1 |

>90% of heat directed to the interior.
Panels can be up to 8.0 x 3.2metres.

Heating the internal pane of window glass can eliminate these effects. Recommended air temperatures in rooms vary according to activity and purpose and, to some extent, culture; but in sedentary domestic and office environments they are generally in the range 17-22°C. Air temperatures much below 17°C / above 24°C are not considered healthy in these areas.

Glass heated to just two degrees higher than the desired room air temperature stops convection down-draughts as well as heat loss from the room through the glass, eliminating the sensation of cold drafts and making it possible to turn down the thermostat without loss of comfort.

When window glass is heated further - to above body temperature - the skin no longer radiates heat to the façade but, rather, is directly warmed by the radiant heat from the glass.

The radiation also warms other surfaces, so the whole volume of air is warmed without being directly heated. The warming effect is therefore felt more rapidly and the general air temperature can be kept at the lower end of the comfort range, reducing ventilation heat losses. It can also provide the opportunity to reduce the cost and embedded carbon of other installed space-heating plant, sometimes eliminating it altogether.

The recommended safe glass temperature range of 21-55°C can be constantly monitored and rapidly adjusted to provide optimal comfort conditions for minimum energy input.

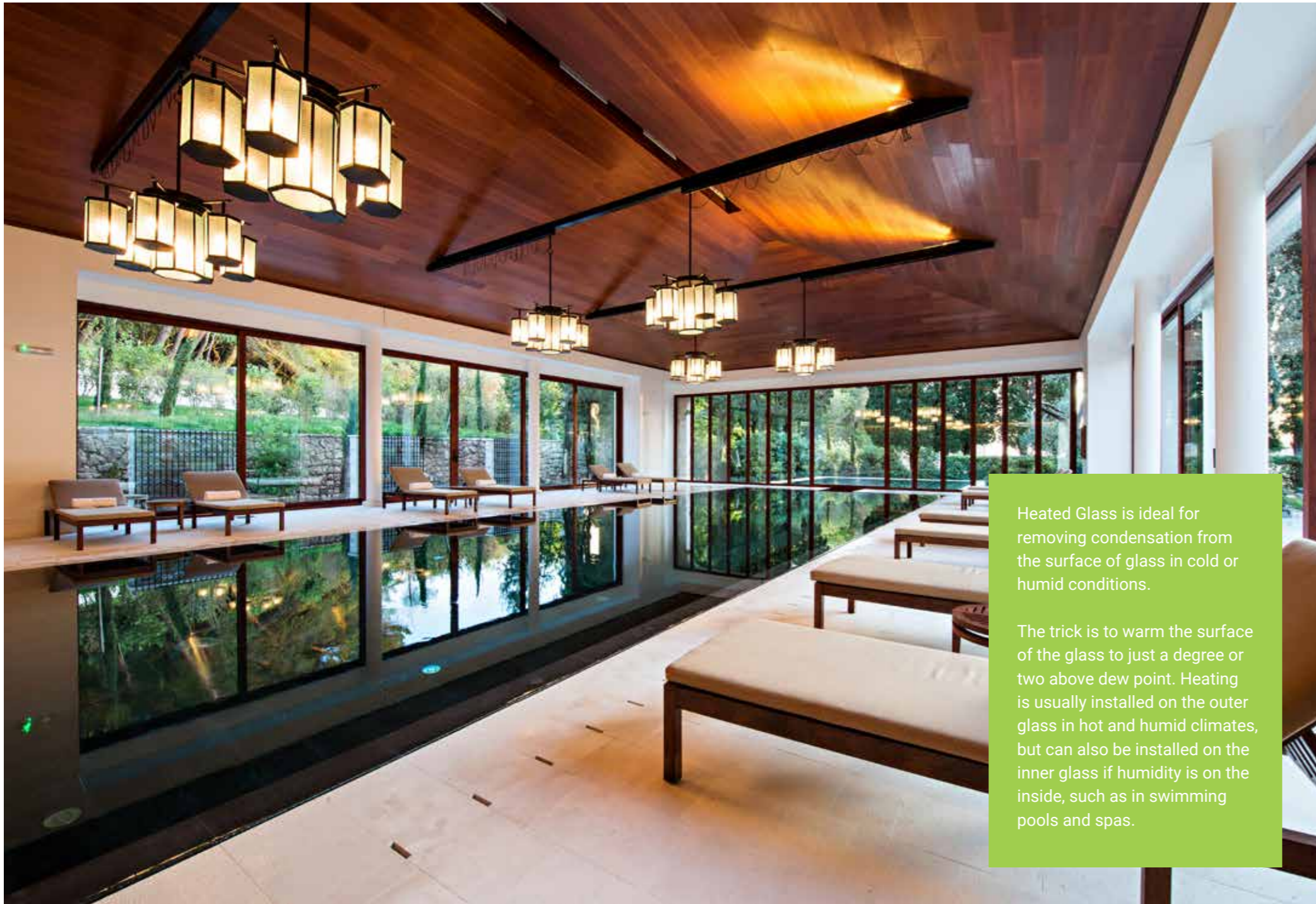
Our experts are able to supply the power consumption calculations to help you understand how your heated glass will perform. Control boxes can be supplied and our engineers will set up an AI system to monitor any heated glass so the product will not allow the room to overheat and can have learning capabilities to allow maximum efficiency of the glass.

The heat power will vary by product function, the location of the installation site, and the glass insulation, etc. Our team will help you choose the best solution for your needs.

The cost to run heated glass will depend on several factors, including the size of the glass surface, the type of heating system used, the cost of electricity in your area, and the amount of time the heating system is in use.

In general, the cost to run heated glass is relatively low compared to other heating systems. It's important to note that the cost to run heated glass can also vary depending on how the system is controlled. For example, if the system is controlled with a thermostat, the cost to run the heating system will be lower because the system will only be in use when it is needed. Additionally, some systems can be controlled through smart home devices or with a smartphone app, which allows you to monitor and adjust the system as needed.

It's always a good idea to consult a professional for a detailed estimate for your specific case and to evaluate if it's cost-effective for your particular situation.



Heated Glass is ideal for removing condensation from the surface of glass in cold or humid conditions.

The trick is to warm the surface of the glass to just a degree or two above dew point. Heating is usually installed on the outer glass in hot and humid climates, but can also be installed on the inner glass if humidity is on the inside, such as in swimming pools and spas.



**Kings College, London
200m2 Heated Glass**

We have supplied electrically heated glass solutions throughout the UK and worldwide. Here is an example installed in France at the Monteur Véranda, Paris.

160 sq.metres of heated double glazing to a spectacular traditional conservatory.

HeatGlaze has been used on a variety of projects including:

- Tropical Court (Texas, USA) 40m2 heated glass
- Oxford residence (Oxford, UK) 120m2 heated glass
- Hampstead residence (London, UK) 180m2 heated glass
- Turpin Longville (Paris, France) 160m2 heated glass
- Swiss Alps Ski Resort (Switzerland) 190m2 heated glass
- Val Sar Ski Resort (France) 70m2 heated glass

Plus many more project in Germany, Spain, Lithuania, Portugal and France.

Glass Aftercare Ltd.

Monaco House
Station Road
Kings Langley
Hertfordshire
WD4 8LQ

 01923 277901

 hello@glassaftercare.com



www.glassaftercare.com