

KIPO

POWER CONSULTANTS

SPECIALIST ENERGY SAVING SOLUTIONS

SAVE ON ENERGY BILLS | CREATE A SUSTAINABLE FUTURE





ABOUT KIPO

We understand that experience and attention to detail are vital to the success of each project. We are trusted by our clients to bring our extensive knowledge and experience to deliver designs and workable solutions for data centres, energy centres and power stations; as well as hotel groups, leisure, health and education sectors.

Our reputation for producing world class, robust, sustainable designs, and specialist power system engineering expertise is a testament to our commitment in providing forward thinking solutions that are specific to your business-critical requirements.

OUR VISION

KIPO have a vision to help our clients to transform and adapt to a sustainable future, ensuring that they comply with environmental legislations, regulations and codes of practice relevant to the industry.

Our team of skilled engineers are committed to delivering the latest technical features, whilst also understanding the importance of low carbon design. We deliver workable solutions for customers through detailed reports and health checks specific to your business-critical requirements.



SUMMARY OF CAPABILITIES

01

SOLAR PV

Photovoltaic schemes use sunlight to produce electricity through inverters. Solar PV systems can reduce your electricity bills and drastically cut your carbon footprint

06

SOLAR WATER HEATING

Solar water heating systems, or 'solar thermal' systems, use free heat from the sun to warm domestic hot water. A conventional boiler or immersion heater can be used to make the water hotter, or to provide hot water when solar energy is unavailable.

02

COMBINED HEATING AND POWER SYSTEMS

CHP is an energy-efficient technology that generates electricity and captures the heat that would otherwise be wasted to provide useful thermal energy - such as steam or hot water - that can be used for space heating, cooling, hot water and industrial processes.

07

WIND POWER

Wind energy is one of the fastest growing renewable power sources. Mechanical power is produced through the transformation of the wind's kinetic force. Wind turbines can drastically cut your electricity bills, carbon footprint and it can store electricity for a calm day.

03

AIR SOURCE HEAT PUMPS

Air source heat pumps take heat from the air and boost it to a higher temperature using a heat pump. The pump needs electricity to run, but it should use less electrical energy than the heat it produces.

08

LED LIGHTING SOLUTIONS

Energy-efficient lighting helps lower electricity bills and carbon dioxide emissions, all without reducing the quality of light in buildings. Businesses of all sizes in any industry can benefit from energy efficient lighting. These benefits are especially advantageous for businesses where lighting is used 24 hours a day.

04

GROUND SOURCE HEAT PUMPS

Ground source heat pumps use pipes that are buried in the garden to extract heat from the ground. This heat can then be used to heat radiators, underfloor or warm air heating systems and hot water.

09

BIOMASS HEATING

Biomass is a renewable energy source, generated from burning wood, plants and other organic matter, rather than gas or oil. Using wood in place of fossil fuels helps to prevent long-term climate change and helps you strive towards becoming carbon neutral.

05

RAINWATER RECYCLING

Rainwater recycling involves collecting rainwater from a building's roof or from any other surface, significantly reducing water bills. The rainwater then passes through a filter, which eliminates debris, and is stored in a holding tank placed either underground or the side of a building.

10

LOWERING ENERGY BILLS

KIPO have the expertise to significantly lower energy consumption and energy bills

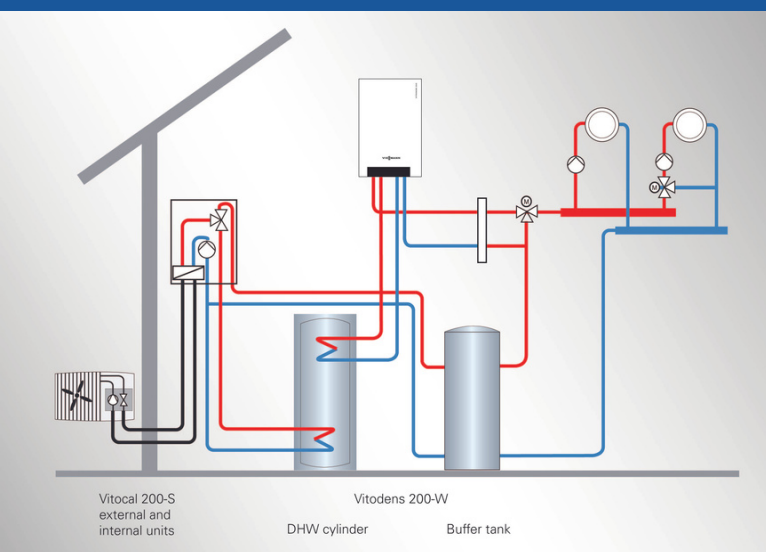
HOLBORN CITADINES HOTEL, LONDON



KIPO worked closely with Citadines to develop a complete renewable solution for the hotel chain by replacing existing gas-fired boilers located in a rooftop plant room above 6 floors of 192 serviced apartments. Citadines required a replacement that could provide water at high temperatures whilst ensuring minimal environmental impact.

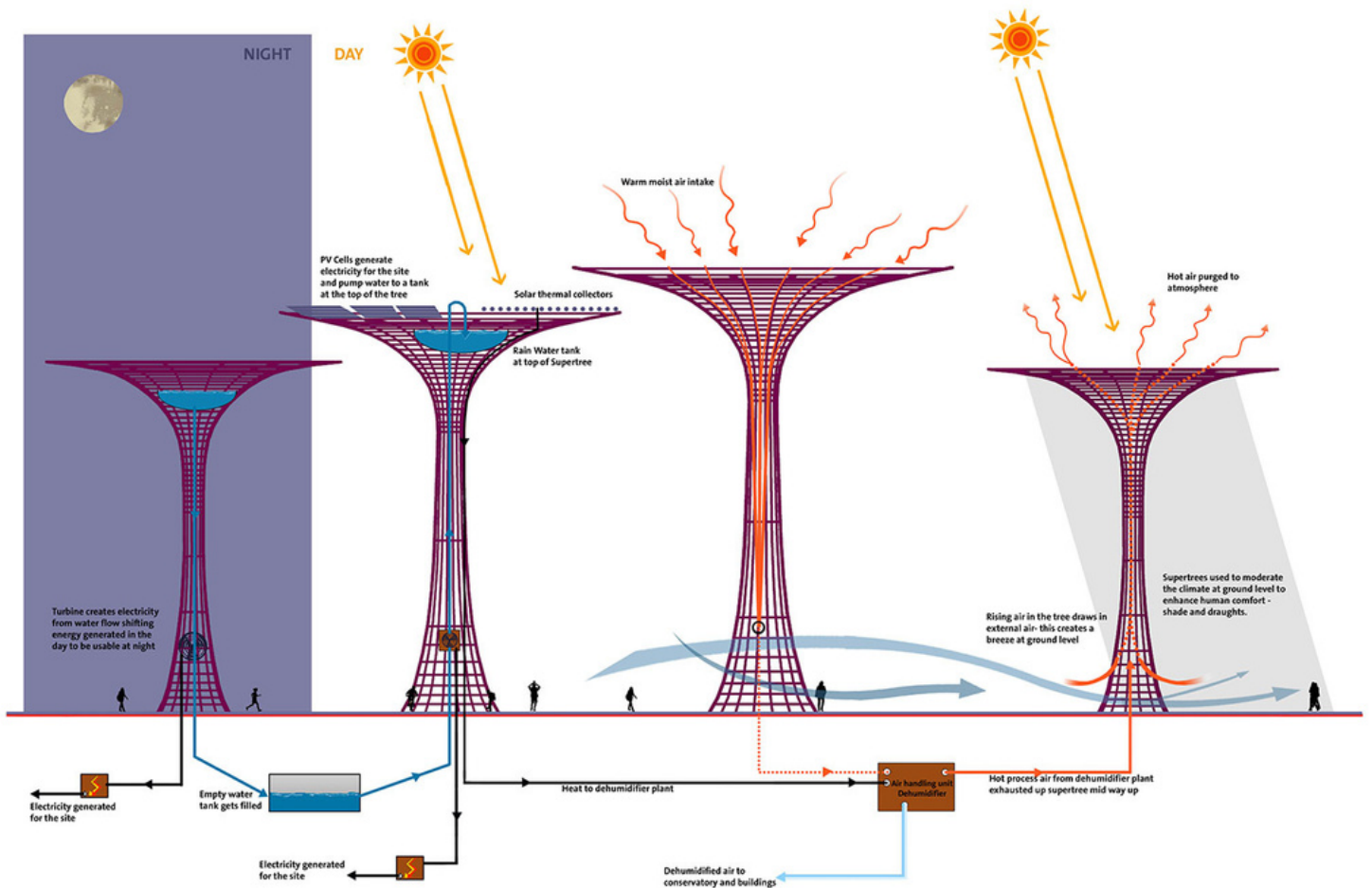
Our Services and Solutions:

- Replacement of existing unreliable and costly boilers with Q-ton Air to Water Heat Pump system that provides water at high temperatures whilst ensuring minimal environmental impact.



SINGAPORE GARDENS BY THE BAY

KIPO were appointed to design the power systems for the Singapore Gardens which included sustainable solutions such as biomass power generation, LED lights, solar PV and fuel cells.



EXCEL ENERGY CENTRE

KIPO were appointed by COFELY to complete the refurbishment of the energy centre that is a part of the Excel. Our experienced engineers also investigated and assessed the best way to achieve a cost-effective, long and short term low energy, control and building management system.

Our services and solutions included:

- The design of 2 new 2mW CHP engines along with medium and low voltage systems
- Negotiation of a 9/8mW export power agreement with SSE and the incoming grid operator
- The design of new controls systems including BMS systems and providing new lighting and emergency lighting designs
- The result of our recommendations was an energy centre that gave back 9.8 megawatts of power back to the utility grid



LONDON 2012 OLYMPICS WATER POLO ARENA

KIPO were the lead designer of the electrical and mechanical services for the Olympics 2012 water polo venue. The commissions included detailed engineering deliverables, a discrimination study, a harmonic study, lighting design and the EMC studies.

Our services and solutions included:

- MEP Design to RIBA stage 4
- Wind turbines
- LED lighting design of the entire venue
- Lighting design of the entire venue
- CFD studies



BIRMINGHAM NEW STREET STATION

KIPO were appointed by Cofely Engineers to design a major CHP scheme for the railway station. This was a part of the £600m regeneration of the station and the overhead shopping centre commissioned to satisfy the doubling of passenger numbers and create a stunning 21st century transport and retail hub.

Our Services and Solutions:

- Design of CHP systems to increase fuel use efficiency, avoiding transmission and distribution losses that occur when electricity travels over power lines.
- The CHP system helped to save considerable money on energy bills due to its high efficiency, and it can provide a hedge against electricity cost increases.



HOMERTOWN UNIVERSITY HOSPITAL IN LONDON

KIPO were asked by Balfour Beatty Engineering Services to perform a review of the CHP system at the Homerton University Hospital.

Our solutions and services:

- Designed a 400KVA CHP system to go within a live boiler room, with pipework adjustments and a new gas supply coupled directly to the incoming power
- Boiler schematics and layout drawings come as second nature to us. Implementing these schemes takes a field of specialist engineering expertise in GAS, BMS and Pipework designs



AT KIPO, WE WORK CLOSELY WITH CLIENTS TO CREATE AND DESIGN ENVIRONMENTALLY RESILIENT AND SUSTAINABLE BUILDING SERVICES AND SYSTEMS.

Energy Audits and Benchmarking

KIPO provide energy audits to help our clients to understand how and where they use energy. This is the first step in identifying, qualifying and prioritising tangible opportunities to reduce energy use, costs and carbon emissions for your project.

Our sustainability aims include:

- Make efficient use of natural resources by conserving energy and water, minimising waste and recycling
- Identify and incorporate long-lasting efficient materials into the design of building systems and services
- Analyse mechanical and electrical systems to ensure that they haven't been over-designed for the application
- Provide energy modelling services to determine the most efficient systems to build. These services can also be used to verify compliance with LEED energy and to ensure that energy benchmarks are met

What we offer:

- Advice on energy-saving measures
- An assessment on whether the low energy solution has very little payback in terms of energy savings, whilst being overly expensive to adopt
- Tailored proposals for the unique needs of the client's business e.g. an older building should be treated differently from a new building.
- Our expertise lies within the design implementation of the recommendations suggested by the Lead Low Energy Consultants, as per the requirements specific to the project. We can also review and carry out changes to engineering solutions, without the consultation of a Low Energy Consultant.