

# Hospitality Sector Council Energy Saving Guidance To net-zero at pace



**ZERO  
CARBON  
FORUM**



**wrap**

Winter 2022

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# 01

## What makes up the energy bill?

# What makes up the energy bill?



Your energy bill is made up of more than just the wholesale cost of the gas or electricity that you use. Your energy bill includes:

- Wholesale costs
- Network costs
- Social and environmental obligations
- Other direct costs
- Supplier operating costs and margin
- Taxes, like VAT.

The good news is that the majority of these additional charges are based on the amount you use, so cutting your usage will reduce most of the charges as part of your bill.

# 02

How much energy does a typical hospitality operator use?

# How much energy does a typical hospitality operator use?

A typical restaurant emits...

over

## 376 tonnes

of carbon per year, the equivalent of heating 117 households in the UK.

And around

## 35%

of UK carbon emissions come from the production and consumption of food and drink.

Annual energy costs for this sector are...

in excess of

## £1.3 billion

resulting in carbon emissions of more than 8 million tonnes per year.

If we can reduce the amount of energy used within the hospitality industry, then not only will businesses be saving carbon they will reap the added benefit of lower energy costs which, in the current energy crisis, will be hugely beneficial.



# Energy use of a typical hospitality operator:

An average outlet uses...

 **355,000 kWh**  
of energy

This is equal to planting...

 **142 Trees**  
per restaurant,  
per year

What does this mean?

**18 Houses**  


And, just to pay your energy bill,  
your restaurant needs to sell...

 **73,800**  
cappuccinos per year!



# 03

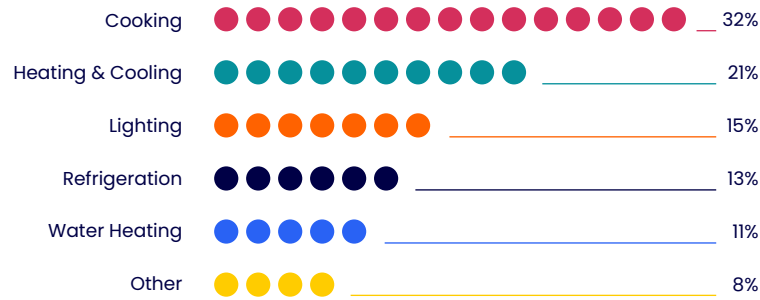
What uses energy  
in a hospitality outlet?



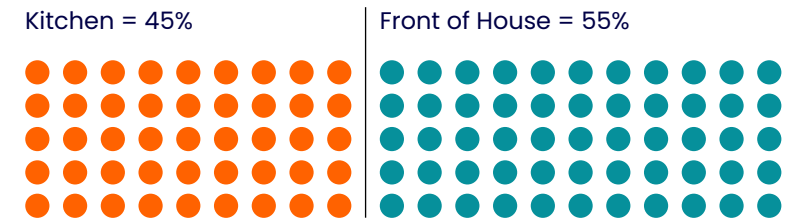
# What uses energy in a hospitality outlet?

Energy is used in a number of ways in running our restaurants, the charts below show you for a typical restaurant where the energy is consumed.

## Energy consumption by function:



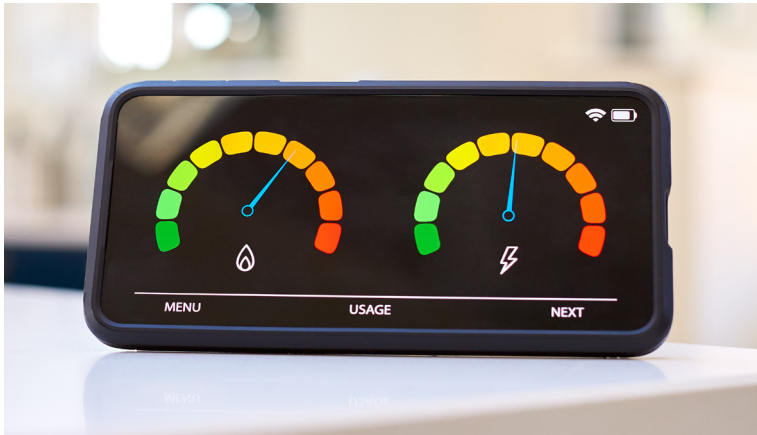
## Energy consumption by area:



# 04

## Ways to save energy: Cut carbon & costs

# How to approach saving energy: Install smart meters



The first step to reducing energy usage is to measure how much energy is being used and identify the high impact areas.

Once you have this data, you can investigate the most effective ways to reduce and save energy. Install smart meters or Sub-meters provided by most energy suppliers at little to no cost.

This will enable you to monitor your energy consumption in real time and in some cases give you access a wider range of tariffs from your provider. Alternatively, you can also opt to install sub-meters which are designed to measure the energy usage of a particular activity, area, or type of equipment.

For more bespoke data, there are also companies that offer customised services that can:

- Analyse energy usage.
- Install multiple sub-meters.
- Link the meters with monitoring software.
- Offer advice and help set targets for savings.

# How to approach saving energy



## Look at what uses energy in your premises:

Make a list of the equipment that uses energy in your premises to engage the teams to turn equipment on/off at the correct times.

At what time of day: By splitting the working day into the following business times, you can monitor the daily consumption of energy used by equipment:

- At opening
- During preparation hours
- After lunch
- At close.

Once you have collected this data, you can work with your staff to make sure equipment is only on when required to save energy consumption. Initiatives such as **Save while you sleep** have delivered significant savings for operators through focusing on a consistent shut down routine.

**SAVE WHILE YOU SLEEP<sup>zzz</sup>**

# Energy saving top tips



There are a range of energy saving practices on maintenance and behaviour that can drive significant savings across in your energy use.



Cooking



Heating



Cooling



Lighting



Fridges & Freezers



Water heating

# Energy saving top tips: Cooking

## Cooking uses 32% of electricity consumption.

There are lots of ways that energy can be saved in the kitchen. Think about what you need on and when. Turning equipment on only when it's required can reduce your kitchen's energy consumption by 40%.



### Top Tips

- Create a kitchen fire up guide of when equipment needs to go on.
- Check settings on your heating and air con units.
- Ensure kitchen extract is turned off overnight.



# Energy saving top tips: Heating

Heating and cooling systems are the 2<sup>nd</sup> highest consumer of electricity.

They typically use 21% which is the same as selling 324 coffees per week.



## Top Tips

- Check temperatures are set 19 – 21c.
- Check the time clocks and timers to ensure they don't run overnight.
- Close doors and windows when it's cold to retain heat.
- Ensure that the times are reset when the clocks change, an additional 1 hour's heating could cost another £237 a year.



# Energy saving top tips: Cooling

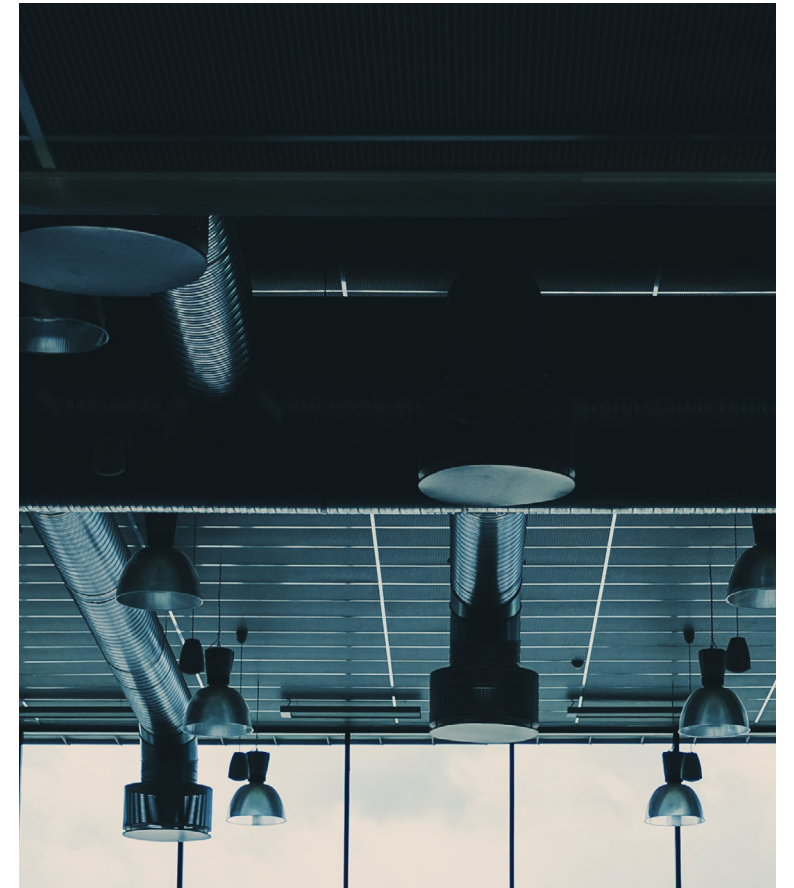
Cooling relates to any air conditioning systems you use to reduce the temperature in your restaurant when it gets hot.

They are large energy users.



## Top Tips

- Check temperatures are set 19 – 21c.
- Check timers to ensure they don't run overnight.
- Open doors and windows on hot days to reduce usage.
- Ensure units aren't blocked with boxes.





# Energy saving top tips: Lighting

Lighting uses 15% of a restaurant's energy consumption.

This is the same as selling 228 coffees per week. Switching off lights when not required can reduce their consumption by 30%.



## Top Tips

- Don't turn on all lights when you get in.
- Only switch on outside lights on opening and closing.
- Switch off bar fridge and toilet lights on closing.
- Check any lighting timers are set correctly.



# Energy saving top tips: Fridges & Freezers

13% of a restaurant's electricity consumption is used by the fridges and freezers

Dusty coils at the back of the fridges and freezers use an extra 20% so keep them clean.



## Top Tips

- Check temperatures are set to -18c freezers and 3 - 5c fridges.
- Check door seals are not perished, and freezer curtains are in place.
- Keep coils at the back of fridges clear of dust.



# Energy saving top tips: Water heating

The water heaters typically use 11% of your restaurant's energy which is the same as selling 168 coffees per week.



## Top Tips

- Check timers to ensure systems are not coming on overnight.
- Check heating temperatures to deliver 43c at the tap.



# Engaging your team



To ensure making energy savings remains a priority within the business, it can be helpful to assign your energy management program to a specific person, job role or working group.

By including staff, this can lead to an overall energy conscious workforce who are more likely to participate if it is part of their role.

Simple actions such as raising awareness amongst kitchen staff and providing energy management training can **reduce catering energy use by up to 30%**.

**Other initiatives to engage staff can include:**

- Creating specific guides and/or checklists for the whole business to follow such as an energy plan. E.g., include list of equipment that needs to be on and when.
- Initiating competitions between different branches of your business, or within sites, and promote it using your staff notice board.
- Share energy reports weekly during team or shift briefings.
- Report good news stories or ideas to the team.
- Speak to staff and other branches to collaborate on best practices.

# 05

## Ways to save energy: Cut carbon & costs

# Energy savings in action: Case study

## Operators taking action

Demonstrating achievable savings from taking action on energy reduction. Through monitoring, identifying key areas, and acting on this information, businesses can make reductions in their energy usage as well as making substantial savings in both costs and carbon.

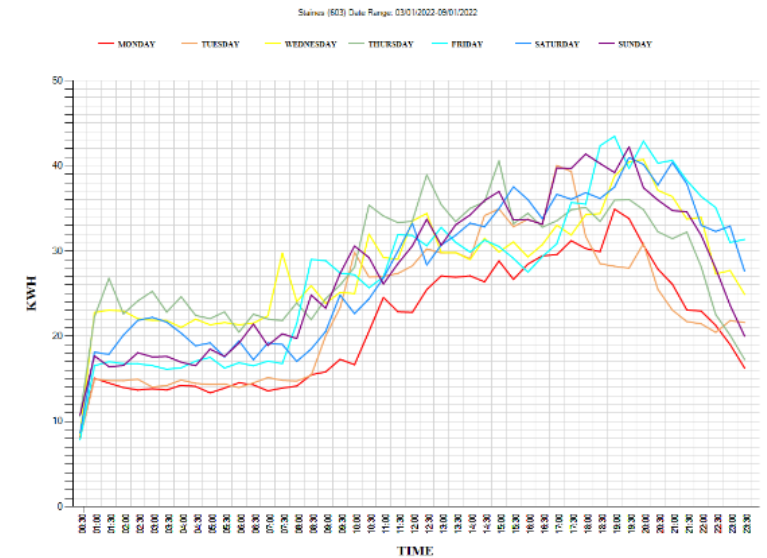
In this example a restaurant outlet focused on operational actions to make reductions of their energy usage. Firstly, the energy consumption was monitored in the first week to locate where energy was being wasted (see figure 1).

The key areas identified were:

- The extract and heating were being left on overnight.
- The fire up was not staggered.
- Equipment was not being turned off/down during quiet periods

The energy usage overall in week 1 was costing the business £1,229 (see figure 3 on p19).

Figure 1. Week 1.



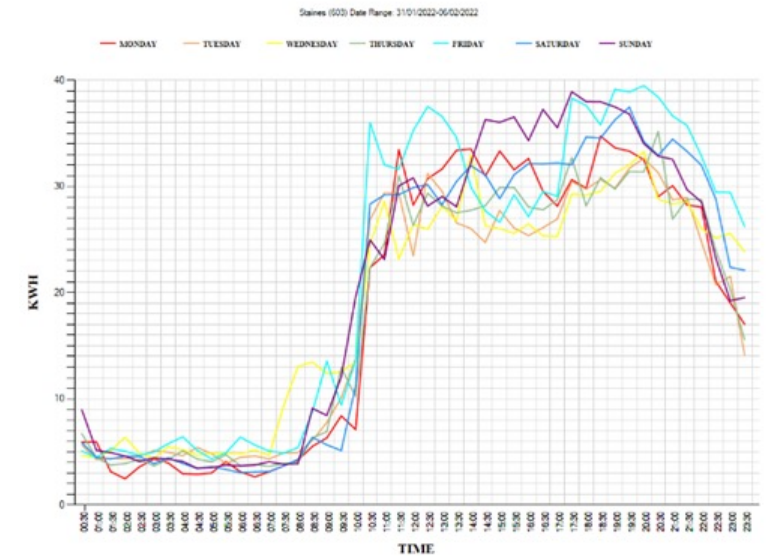
# Operators taking action

## Energy savings in action: Case study

After identifying the problem areas, the business was advised to take the following measures to save electricity:

- An engineer attended and fixed their extraction timer as it was broken.
- Arranged prep order so the extraction can come on as late as possible (10am).
- Turning equipment on later such as the glasswasher and turning off equipment like the cutlery polisher between use.
- Turning off equipment in quiet services.
- Gradual close down, turning off and cleaning equipment as soon as unrequired.

Figure 2. Week 5.



# Operators taking action

## Energy savings in action: Case study

By following these measures, the savings over the span of a year equates to £18,000 and will prevent 28 tonnes of carbon being released.

The business could still save energy by following these further recommendations:

- Continued control of fire up – Friday was high compared to the rest of the week.
- Continuing to turn off equipment when quiet.

Figure 3. Table of savings.

	Week 1	Week 5	Saving
Overall	£1299	£ 881	£ 348
Trading	£ 660	£ 611	£ 49
Non Trading	£ 568	£ 269	£ 299



# 06

## Guide to buying credible renewable energy

# Guide to buying credible renewable energy

There are many ways to purchase renewable energy that will enable you to reduce your carbon emissions from your business. The key to doing this, is to purchase the energy from credible sources that guarantee it is one hundred percent green energy.

You can switch to renewable energy by:

- Investing in generating your own energy e.g. by installing solar PV (photovoltaics) or wind turbines.
- Asking your energy provider about renewable options.
- Sign up to a long term Power Purchase Agreement to buy renewable power.

Due to the current energy crisis, there is an increased demand of people and businesses generating their own energy. By installing solar panels, you can reduce your reliance on the National Grid and avoid increasing energy prices. Depending on the location, you could also look to install a wind turbine. Either of these methods could also qualify you for a business rate exemption.

To get the most competitive offer for renewable energy, you should compare electricity and gas providers. One of the ways you can ensure the providers are credible are by checking if they are backed by the Renewable Energy Guarantees of Origin (REGO) scheme as this provides transparency to consumers about the proportion of electricity that suppliers source from renewable generation.

# 07

## Resources

# Resources



The Zero Carbon Forum is a non-profit collaboration of Brewing and Hospitality operators to cut carbon and costs and reach net-zero together at pace.

**[savewhileyou.sleep.world](https://savewhileyou.sleep.world)**

**[zerocarbonforum.com/calculator-zcf](https://zerocarbonforum.com/calculator-zcf)**



Hospitality sector energy saving guide.

**[carbontrust.com/our-work-and-impact/guides-reports-and-tools/hospitality-sector-energy-saving-guide](https://carbontrust.com/our-work-and-impact/guides-reports-and-tools/hospitality-sector-energy-saving-guide)**



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