



ENERGY SAVING GUIDE

ENERGY MANAGEMENT BEST PRACTICE
FOR HOSPITALITY BUSINESSES



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1. Checklist



Have you considered how energy is used?



If you switch something on, it uses energy and costs money... very simple we know, but it's true! Here are some things to think about:



When do you need your glasswasher... 3pm, if so don't switch on at 9am when you open up.



Are all your lights fitted with LED lamps, if not invest in LED lamps they will save you money.



Do you have over door heaters, if so when do you switch them on? Only use them when you need them.



Do you have Thermostatic Valves (TRV) on all your radiators? If not consider the investment, it helps zoning and controlling heating areas.



Do you open up all trading rooms every day? If not zone the heating through TRV and switch off the heating in unused rooms.



Do you have your external lights on all night? If so switch them off when you close or put the switch on a timer, so they only come on when needed.



Are all your bottle coolers and fridge seal in good order or are the units leaking cold air. If they are consider changing the seals.



Do all your doors shut snugly into their frames? If not consider running insulation tape around the reveals or adjusting door closers so they fit tight.



Are your urinals controlled by an auto flush system, if not consider fitting one, you will save water.



Have you looked into your loft space and is it insulated? If not consider laying loft insulation.



Do you have a kitchen and is your extract unit on full all day long? Only switch it on during service.



Set your central heating temperature to 21°C max or consider dropping it 1 degree.



Do you leave TVs and AWP's on standby? If you do you are using electricity. Switch them off at the wall.

Some of these recommendations may vary depending upon the repair obligations as set out in your tenancy or lease agreement. Please therefore refer to your tenancy or lease agreement for full details or discuss any queries with your BDM.

**THE ATTACHED GUIDE
WILL GIVE YOU MORE
DETAIL AND ADVICE ON
THE ABOVE**

Remember – "Switch it off, it saves you energy"



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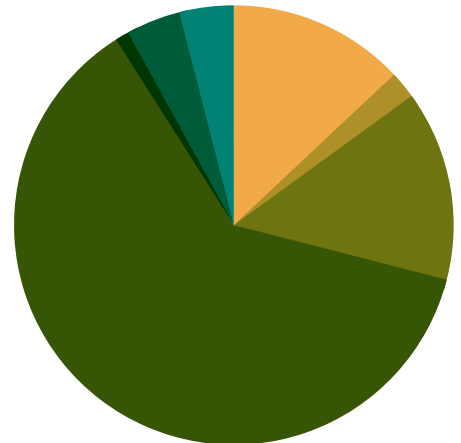
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T A V E R N S

2. Where Does It All Go?

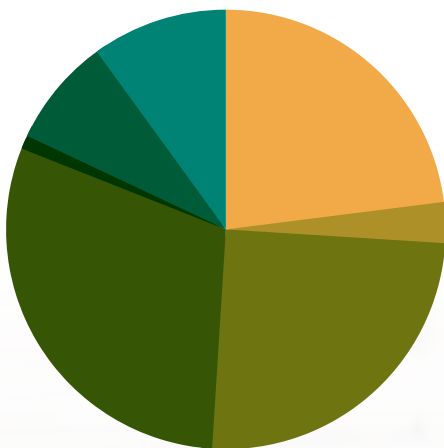
Hospitality businesses consume a lot of energy, after labour and the cost of food and drink, it's often the largest cost. So where does it all go?

It will depend upon the nature of your business. The three charts here show typical breakdowns of food and drinks led businesses.

Dry-Led Business



Wet-Led Business

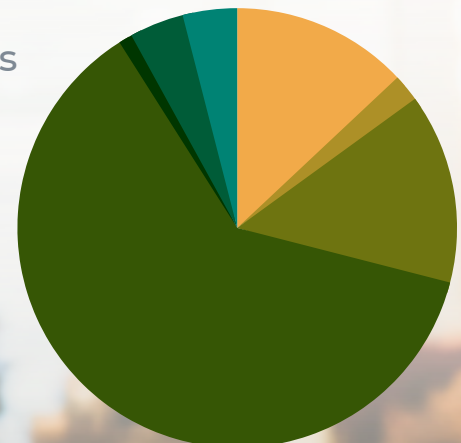


Kitchens tend to consume the most energy in a business where there are present. However, there are other significant areas of consumption including cellars, heating and hot water, and not forgetting water consumption which can also be a substantial cost.

The most energy efficient businesses will have good start up and close down procedures in place, covering the whole premises.

All the team should be aware of the need to ensure that unnecessary equipment is not left on.

Wet-Only Business



3. We're a Team

Energy consumption can be significantly reduced if everyone is aware of all the things they can do, small or large to help keep consumption down, this guide covers all those actions.

Energy efficiency needs to become an everyday practice, simply part of the way you do business.

Do you walk past equipment that has been left on without saying anything? Always pick up on bad practice, otherwise it can seem as though you are in “tacit agreement” and that you do not care or are quite happy for the practice to continue.

Ensure energy efficiency and best practice is included in staff induction programs and that new equipment is understood by staff to ensure efficient operation.

Top Tips

Devise a business “close down” and “start up” checklist for every part of your business so that everything is turned on or off at the correct time every day.



4. Lighting

THINGS YOU CAN DO FOR FREE

- Make use of natural light wherever you can.
- Only turn on lights as needed, especially outside of trading hours and back of house lighting.
- Switches should be well labelled to allow individual/zonal control of lighting in FOH areas. Use colour-coded labels to clearly identify which lights should be on and when.
- Ensure any timers for external lighting are working properly and adjusted throughout the year to reflect daylight hours.

Upgrading 16x old lamps for LEDs
can save £1000 a year!



LOWER COST FIXES

Switching to LED lighting, most old lamps
can simply be swapped for an LED one.
Payback times are around one month.

4. Lighting (cont.)

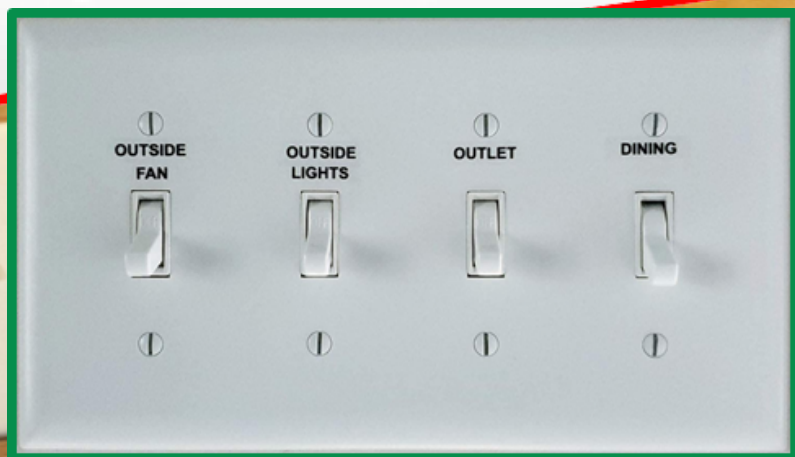
Top Tips

An easy way to tell if a lamp is energy efficient or not is by feeling how much heat is emitted when it is turned on, if it is too hot to touch it's non-efficient and should be replaced.

HIGHER COST PROJECTS

Occasionally the fitting itself may need replacing to fit an LED lamp. Do these all at once to avoid multiple call-out fees. Payback time around nine months.

PIR (movement) sensors can be installed for toilets and BOH areas. This means lights can't be left on unnecessarily. Payback time around one year.



Ensure light switches are labelled!

5. Heating and Cooling

THINGS YOU CAN DO FOR FREE

- Use schedules to ensure heating/AC is not left on when not needed.
- For AC, an 'off only' schedule is most useful, where staff turn on heating as required but the schedule is set to shut off when the business closes.
- Use separate schedules for trade and accommodation areas as heating is usually required in these areas at different times.
- Central heating should be set to a realistic temperature (max. 21°C)
- Use of plug-in electric heaters should be avoided in favour of central heating or air conditioning as they are far less efficient.



LOWER COST FIXES

- If thermostatic radiator valves (TRVs) are not in place, consider installing these, especially in areas that are not always in use or where other heating such as an open fire is present.
- Effective insulation is the cheapest way to keep a building warm. External doors and windows should be free from draughts, using draught exclusion strips where needed. Payback time around six months.



Preventing a simple draught can save £100's per year!

Turning the thermostat down by 1°C can save 10% of heating costs!

5. Heating and Cooling (cont.)

THINGS YOU CAN DO FOR FREE

- Ensure TRVs are used as needed, especially for areas not always in use like accommodation or function rooms. Remember, customers will alter these, check them regularly.
- Radiators should always be free from air flow obstructions.
- Ensure overdoor heaters are only used when needed, and always switched off overnight
- Air conditioning can cost up to £20 per unit per day to run, so only use it when needed.
- Air conditioning should be set to heat at 21°C and cool at 24°C.
- External heat lamps consume a lot of electricity and should only be used when needed. Ensure they are isolated off during mild weather so they can't be used when not needed.



HIGHER COST PROJECTS

- Consider the controls in place for external heat lamps. They should have time delay controls rather than simple on/off switches, ideally allowing no more than 15 minutes usage before switching off again.
- Walls and ceilings should be insulated, it is recommended that you refer to a recent EPC certificate for the property if available or get a new EPC assessment to inform of any building fabric alterations that may be required

6. Hot Water

THINGS YOU CAN DO FOR FREE

- Ensure boiler controls are set up so that water is not heated any hotter than required. The optimum set point is around 60°C.
- Hot water controls should be timed if a storage tank is used as hot water is not usually required when the business is closed.
- If you have a gas boiler and a storage tank for hot water with immersion elements fitted, the elements are often intended for use as back up should the gas boiler fail. Try turning the immersion elements off, if hot water is still supplied you just saved yourself around £300 p.a.

Top Tips

A hot water cylinder should have at least 150mm of insulation for optimum savings. Adding insulation to exposed tanks and pipework is usually straightforward and gives instant savings.





6. Hot Water (cont.)

LOWER COST FIXES

Ensure hot water pipework is insulated, especially when it is situated in areas that are actively cooled such as the cellar. A relatively low outlay on pipe lagging can give substantial savings.

Every meter of uninsulated pipework can cost £150 p.a. in lost heat!

HIGHER COST PROJECTS

- Ensure that the method of hot water supply in place is appropriate for the type of building and business. It is usually best to have separate controls or supplies of hot water for business and accommodation use.
- Retro-fitting time controls for the hot water supply so this can be switched off when not needed can give big savings.

7. In the Cellar



THINGS YOU CAN DO FOR FREE

- The perfect cellar temperature is between 11°C and 13°C at the point where the beer is positioned. Regularly check the temperature at cask height with a thermometer (away from the wall) and adjust the cellar cooling to achieve the correct temperature.
- Setting the temperature too low and you will waste large amounts of energy on cooling as well run the risk of “chill haze” in beers, too high and your beers will not keep well and quality will be affected.
- Ensure air can flow freely around chillers, including cellar chillers, beer line chillers and post-mix dispense units

LOWER COST FIXES

Ensure the cellar is well insulated, including a door with self-closer and draught exclusion. Any cold air allowed to escape/warm air allowed into the cellar causes the cellar chiller to use more energy to achieve the set temperature. Basic draught exclusion should have a payback time of around 3 months.

Having your cellar 1°C colder than necessary could be costing you an extra £450 p.a.!

7. In the Cellar (cont.)

HIGHER COST PROJECTS

- Installation of time controllers for chillers in the cellar is a great way to save wasted energy. Admiral have a relationship with Technik2 who's suite of technology includes time/ thermostatic controls for the cellar chiller (cellar manager), beer line chillers (remote optimiser), post-mix dispense (smart python timer), and bottle fridges (fridge manager). Installation of these controllers has a typical payback time of 6 - 9 months.
- The cellar area can be re-arranged or re-designed to ensure the cellar is suitable size (not so big that you end up chilling unused spaces).
- Segregating heat-emitting equipment from the chilled area can be achieved through installation 'heat dumps' for chillers, partition walls or insulating curtains

Time control of cellar chillers can save over £1,000 p.a.!



Top Tips

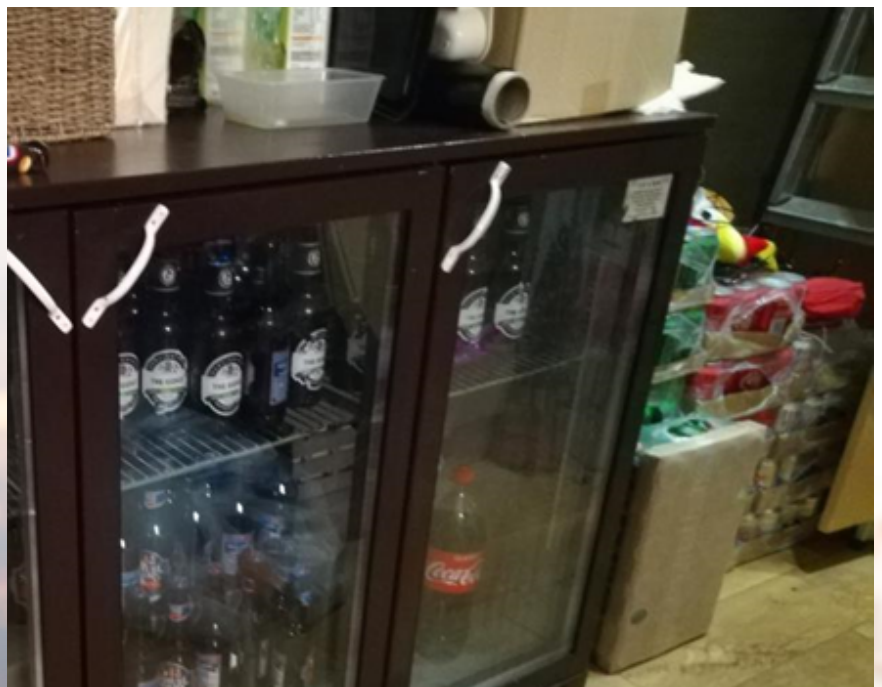
If your beer chiller or post-mix chiller has a DFx Series 1e controller (see above), you can program your trading hours so it turns off when not needed – this can save up to £250 p.a. View the manual online for help.

8. Behind the Bar

THINGS YOU CAN DO FOR FREE

- Coffee machines should be turned off or put into 'standby' or 'economy' mode whenever the machine is not to be used for a few hours or more (e.g. overnight) and only turned on 30 mins before use.
- Only turn on your glass washer when your first tray is full.
- Wash full loads in the glasswasher - running it for partial loads could be wasting you over £200 p.a. Always keep the door shut to retain the heat, and only switch on a second machine during peak times.

Delaying glasswasher switch-on by 2 hours each day can save over £500 p.a.!



8. Behind the Bar (cont.)

THINGS YOU CAN DO FOR FREE

- Turn fridge lights and pump lights off overnight if possible.
- Re-stock fridges with pre-chilled product if possible - they run most efficiently when full.
- Clean the ventilation grills and/or pull-out filters on fridges, ice machines and chillers regularly to ensure air flow is maintained. If these get dirty, the machine has to work harder to draw in air which uses more energy and is likely to result in eventual breakdown.
- Regularly clean fridge seals as this will extend their useful life



LOWER COST FIXES

- Check that seals on bottle fridges are making an effective seal. Replacing damaged ones has a payback time of less than 6 months.
- Keep your glass wash machines well maintained and ensure all the water jets on the arms and in the cabinet are clean and not blocked. A missing nozzle in your glass washer will waste significant amounts of power and it will increase the amount of water wastage.

A damaged fridge seal can
cost over £100 p.a.!

9. In the Kitchen

THINGS YOU CAN DO FOR FREE

- Use kitchen extraction wisely, starting with ensuring extraction and supply units are turned off overnight. If variable speed controllers are present, these should be adjusted based on the required demand using the lowest speed possible that still delivers effective extraction.
- If the kitchen extract is pulling open the kitchen doors, this will cause warm air from the trading areas being drawn out to be replaced through draught from outdoors. As there is an imbalance between extraction and supply, try turning the extraction speed down or changing the balance between the supply and the extraction.
- Fridges should be maintained at 1 to 4°C, whilst freezers must be maintained at -18 to -21°C. Fridges should be stacked efficiently so that cold air can pass freely over the contents but never overfilled. Freezers will be more efficient if stocked fully and compactly, but always below the maximum fill line.

Turning off kitchen extraction overnight can save around £3,000 p.a.!

Top Tips

Always keep the internal curtains on 'walk-in' fridges and freezers in place to stop heat getting in and cold escaping. When loading deliveries, set the fridge program to 'defrost' – but remember to change it back afterwards.



9. In the Kitchen (cont.)

THINGS YOU CAN DO FOR FREE

The start-up and use of kitchen equipment is significant area for energy wastage, see relative costs below. All equipment should only be turned on in-line with its heat up time and anticipated usage. Most equipment can be turned down or off when not in use.

Selected kitchen equipment	Cost per hour	Annual Saving From 1hr per day reduction
2 Burner Gas Range & Oven	£1.72	£447
4 Burner Gas Range & Oven	£3.39	£894
6 Burner Gas Range & Oven	£6.64	£1,748
Gas Solid Top Range & Oven	£6.16	£1,626
Electric Salamander Grill	£2.55	£929
Gas Salamander Grill	£1.23	£325
Electric Double Fryer	£7.64	£2,787
Gas Double Fryer	£3.70	£976
10 Grid Combi Oven	£0.95	£174
Heated Gantry	£0.95	£348
Gas Chargrill	£6.16	£1,626
Pass Through Dishwasher	£1.91	£697
Alto Shaam	£0.95	£348
Electric Pizza Oven	£1.91	£697
Rotary Toaster	£0.80	£290
Hot Cupboard	£2.23	£813
Steamer	£2.86	£1,045

HIGHER COST PROJECTS

- Retrofitting variable speed controls to the existing kitchen extraction system or replacing kitchen extraction with a more efficient and/or more suitable model can save over £1,000 p.a.
- Heating supply air can prevent the kitchen getting too cold in the winter when cold air is drawn from outside. This can be achieved by using the residual heat from the extracted air over the cookline.

10. Water Use

THINGS YOU CAN DO FOR FREE

- Regularly check that taps in toilets, kitchens, bars and staff areas are not dripping or leaking and get washers replaced quickly to ensure no water is being wasted... especially hot water!
- Push-button or sensor taps should be checked to ensure that they are working and turn off after a reasonable time.
- You should also check that toilets are not over-filling - there should be no sound or visuals of trickling water once the tank has re-filled following a flush.
- Hidden water leaks can waste large amounts of water without you even knowing. To check for leaks, read your water meter and do not use any water for a couple of hours. Then, go back and check the meter.



LOWER COST FIXES

Fitting urinals with water saving devices will save a lot of water whilst the business is closed. First ensure that you have a device fitted, then check it is flushing effectively but not too often, If they're not flushing at all, the batteries in the water saving device might need replacing

A water saving device can save over £2,000 of water p.a.!



11. Other Areas

THINGS YOU CAN DO FOR FREE

- Function rooms or other rarely used areas are usually an area where savings can be made. Ensure that everything that can be turned off is switched off when these areas are not in use, this includes bottle fridges (turn on again ~12 hours before use), coffee machines, fans, music/ entertainment systems, TVs and fruit machines.
- Equipment such as irons, heaters, lights and chargers can easily be left on in staff areas. Routinely check these areas and turn things off as required.
- Office spaces can also waste energy. Ensure heating is low or off when these areas are not in use. P.C. monitors, CCTV screens, chargers and music systems should be switched off overnight.



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HOSPITALITY
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THE HOSPITALITY EXPERTS FOR:

- REDUCING ENERGY CONSUMPTION
- CARING FOR THE ENVIRONMENT
- REDUCING CARBON EMISSIONS
- BECOMING MORE SUSTAINABLE
- INCREASING PROFIT