

## How to green your business: Food and drink industries

Want to Go Green but not sure where to start? Here are some tips to reduce the environmental impacts of your food and drink business.

### Energy

#### Heating and cooling

- Make sure fans, pumps and central plant, such as cooling towers, boilers and chillers, do not operate outside the periods when buildings are occupied, except where they are needed for pre-heating or pre-cooling.
- Make sure windows and doors are closed when heating or air conditioning is on.
- Service boilers regularly for optimum performance. A boiler can use up to 10% more energy if poorly maintained. Dirty heat exchangers, poor air:fuel mixing or faulty components increase running costs and the risk of breakdown.
- Insulate windows, doors, lofts, boilers and pipes.

#### Lighting

- Replace tungsten bulbs with energy-efficient, compact fluorescent lamps and slimline tubes. They typically make immediate savings of 50% and last up to ten times longer.
- Use natural light wherever possible. Keep windows clean. Clean light fittings, especially plastic diffusers. Make sure lights can be switched off manually (particularly near windows) or install daylight sensors.
- Install presence detector lighting controls in places not in constant use, e.g. toilets, store rooms and meeting rooms.
- Ensure lighting controls are clearly labelled, especially if they are grouped together.

### Waste

#### Reduce material use

- Choose minimally packaged products or ask your suppliers to supply products in less packaging. Ask your suppliers to take excess packaging away with them when they deliver.
- Use electronic communication where possible to reduce printing and faxing. Ensure that your staff are comfortable with new technology and provide training where necessary. Encourage them not to print out emails unless absolutely necessary.

- Make use of local resource centres and charities that reuse computers, furniture and other materials from businesses.

#### Legal compliance

- Ensure that special waste disposal procedures are in place for hazardous waste such as oil, sanitary waste and fluorescent tubes.

### Water

- Fix dripping taps.
- Consider fitting block valves to control flow rates instead of control valves; this will avoid the need to change preset positions.
- Using mains water once only, for cooling, is wasteful. Consider other sources of cooling water – grey water, process quality water and borehole, river or canal water. You could also reuse cooling

water as feed water or make-up water in other equipment. Consider installing cooling water systems using recycling through a closed system fitted with an air blast cooler.

- Discharging wastewater to effluent streams can be wasteful; in some cases this water might be of sufficiently high quality to be reused. Check the quality of the water. It may require treatment to reduce contamination. Consider reuse in

non-food applications or as a pre-rinse in counter-current rinsing.

- Fit trigger-operated controls to hoses to prevent hoses being left turned on unnecessarily.
- Use of dry conveyors or chutes to transfer materials can have an impact on water consumption. Flumes can use a lot of water and this is often discarded. Consider dry handling methods if appropriate, practical and hygiene standards allow. Flumes are generally kinder to product than dry conveyors or chutes.
- Air or microwave thawing techniques will save water over water-thawing techniques. If you use water thawing techniques, insert thermocouples into the centre of frozen blocks to automatically turn off the water supply when the material has thawed.
- Flushing out pipework uses considerable quantities of water. A pigging system would reduce water usage and also recover product left in the pipework. This will also reduce your effluent bills. Any product that will flow can be pigged, e.g. sauces, jam, milk and juices. Pigging systems can clear pipework more quickly than cleaning with water.
- Water sprays may be used to wash or cool raw materials or product. Is the right type of spray being used?
  - Focusing the spray can significantly reduce water use.
  - Directional nozzles that spray large drops in a cone pattern are best for chill rooms.

- High pressure jets and sprays reduce water use for washing raw materials
- Maintain nozzles. Worn or heavily scaled spray nozzles are inefficient and can result in more water being used.

## Cleaning

- Only use washers when they are full. If contents are not stacked properly they may not be cleaned efficiently and will have to be washed again. Automatic container washers can give water savings of up to 95% compared with pressure-cleaning your containers.
- Consider using foam and gel cleaners; they require less rinsing.
- Use dry cleanup methods to remove product waste from vessels, equipment and floors. Using water to 'flush away' waste increases water consumption considerably. It also means the volume and concentration of trade effluent will be higher. Scrapers, squeegees, brushes and brooms are ideal.
- Wash water is often flushed down the drain because it has been 'used'. It may be reusable for certain applications on your site. Consider counter-current rinsing. The item is rinsed first in grey (used) water and then in progressively cleaner water for each following rinse. At the same time, the rinse water moves from the last rinse (clean water) towards the first rinse (grey water). Typical water savings are around 40%.

## Travel

- Monitor the fuel performance of company vehicles and ensure they are regularly serviced and maintained by a reputable garage.
- If your fleet management is outsourced, ensure that you set high environmental standards within the contract and specify aspects such as fuel economy and emissions testing.

## Purchasing

- Use locally sourced raw materials.
- Ensure appliances such as fridges have a European Union Energy Rating of A or B.
- Ask your suppliers or manufacturers of new equipment to supply data on the average power consumed under typical operating conditions and the stand-by and low energy consumption.