

Swimming Pools – Simple steps to saving money and the environment



Swimming pools are energy intensive facilities - have you considered whether yours is as efficient as it might be?

A review of the everyday management of your pool facilities may reveal a suite of simple, low cost energy saving measures and good housekeeping improvements with short payback periods.

Saving energy can increase the profitability of your business and also;

- improve comfort conditions for both staff and centre users (e.g. elimination of draughts, moisture and overheating)
- reduce maintenance costs. Operating energy-consuming equipment more efficiently can increase the useful life of apparatus, resulting in capital replacement costs being deferred.

Optimally managed pool halls can also reduce the risk of damage to the building fabric caused by condensation from overheating of pool water.

This checklist will help you undertake a basic review of your pool management, however, depending on the age and design of your facilities there are likely to be far greater savings to be made. For more detailed technical advice take a look at Good Practice Guides 219 and 390 produced by the Carbon Trust (download from www.thecarbontrust.co.uk), or contact:

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Checklist

Tips for Pool Hall

- Keep doors closed between areas with different temperatures and humidity
- Check that pool covers are used at the end of the session — this also applies to spa baths

Did you know that installing a pool cover can cut total pool energy use by between 10-30% by reducing heat loss and ventilation requirements, with a payback period of 18 months to 3 years?

- Conduct regular pool backwashing and clean the pool filters to maintain good quality clean water

Using the appropriate interval between consecutive backwashes of a pool filter will cut down on energy and water consumption. The interval will depend on the type of pool and the degree of usage. Often cyclic (e.g. weekly) backwashes are recommended, but some manufacturers prefer that the pressure drop across a filter is used as an indicator of when a backwash is required. Always consult the manufacturers of your pool equipment if you are considering changing the maintenance regime.

- Keep the introduction of fresh pool water to a sensible minimum, consistent with maintaining water quality
- Regularly check air and water temperatures and keep the air temperature close to, but above, the pool water temperature (29°C, maximum recommended water temperature for leisure pools, 40 °C for spas).

Ensure that staff are aware of optimum operating temperatures for the pool hall as 'too cold' can cause as many problems as 'too hot' in these areas.

- Keep the relative humidity in the pool hall between 55-65%

Case studies have shown that where a full cover is fitted, the ventilation plant has been shut down completely at night without condensation problems occurring. A humidistat within the pool hall will ensure that the ventilation system is switched on only if relative humidity within the hall rises above 65-70%.

- Staff should know how the plant and control systems operate — introduce additional training if necessary
- Keep a record of standard control settings for different pool occupancy profiles — make sure that staff can access and use these settings
- Regularly calibrate technical equipment such as swimming pool probes as their performance could affect the energy consumption of the site.

Tips for other areas

- Storerooms, corridors and areas where there is heavy physical activity can be set to lower temperatures, say 16°C
- Keep external doors and windows closed, particularly in cold weather
- Make sure that in air-conditioned areas, heating and cooling systems are not operating simultaneously as this wastes a great deal of energy
- Keep internal doors closed where they are between spaces of differing temperatures. If staff are too warm, turn the heating down instead of opening doors or windows.
- Turn off lights in empty rooms and corridors, especially at the end of the day. This can save up to 15% of your lighting bill. Replace lights that flicker (they use more energy) and clean lights and fittings regularly
- Lights too bright in corridors? Switch off alternate fittings
- Use daylight where possible. It's free — so keep windows and skylights clean and clear
- Saunas, steam rooms and spas are very energy intensive so switch off heaters and pumps when not in use
- Switch off air-conditioning plant and apparatus in fitness suites when not in use.

Tips for energy management

- Check that consumption of electricity, gas and oil matches your bills. Some sites rely on data from energy and water invoices but the only way to obtain reliable data is to read your own meters. Meters should be read regularly, at least monthly
- Record energy consumption on a regular basis and investigate any increase in energy consumption that is unaccounted for
- Ask your colleagues for ideas on saving energy and where they think energy is being wasted
- Encourage staff to turn off taps — this information will also be of value to staff who have metered water at home
- Check the different ways that hot water is used at your centre and use cold water for cleaning purposes wherever possible
- Make sure that hoses used to rinse poolside areas are fully turned off after use
- Carry out regular good housekeeping measures
- Note down any remedial or maintenance requirements and make sure these are carried out.