



SPORTS & LEISURE CENTRES

Energy Efficiency Guide



Optimising performance, reducing costs, & promoting sustainability.

Why It Matters

Sports and leisure centres consume large volumes of energy — not just from heating pools or lighting courts, but from long opening hours, varied space usage, and energy-hungry kit like treadmills, saunas, and HVAC systems.

As energy prices rise and net zero targets become urgent, energy efficiency is no longer a nice-to-have. It's vital to:

- **Protect operating margins**
- **Keep facilities affordable and open**
- **Demonstrate sustainability leadership to members, councils, and funders**
- **Create comfortable, safe environments for all users**



Where the Energy Goes

- **Heating**
 - Pool halls, changing areas, studios and sports halls
- **Lighting**
 - Extended hours, often in large spaces
- **Swimming Pools**
 - Continuous heating and circulation
- **Saunas & Steam Rooms**
 - High temperatures, long runtimes
- **Gym Equipment**
 - Cardio machines, TVs, and resistance stations
- **Ventilation & Air Handling**
 - Especially in enclosed or humid zones



ENERGY-SAVING MEASURES

POOLS & WET AREAS

- Install pool covers during off-hours to reduce heat loss
- Add variable speed drives to circulation pumps
- Use air or ground source heat pumps for low-carbon heating
- Explore solar thermal to pre-heat water
- Optimise water treatment systems and heat recovery in plant rooms

SAUNAS & STEAM ROOMS

- Review runtimes — align with peak use only
- Install timer switches and clear shut-off responsibilities
- Use infrared saunas as a lower-consumption alternative
- Recover heat via mechanical ventilation systems

LIGHTING & HVAC

- Switch to LED lighting across all areas
- Install motion or daylight sensors in halls, studios and back-of-house
- Schedule HVAC based on class times and booking data — not default hours
- Maintain systems to prevent performance drift and energy waste



Gym & Fitness Equipment

Energy use in the gym is often overlooked – but the combined draw of treadmills, bikes, lighting, and TVs adds up fast.

Practical Moves:

- Use self-powered cardio kit (e.g. spin bikes, rowing machines) where possible
- Unplug or power down 85% treadmills during quieter hours
- Fit smart timers or plug strips to isolate blocks of machines overnight
- Encourage manual or air resistance equipment in new purchases (e.g. Assault Bikes)
- Turn off unused screens, TVs and music systems in off-peak areas

If members can walk in and lift weights unlit, unpowered, why are we running 12 treadmills all day?



Planning for Long-Term Sustainability

- **Solar PV:** Install on flat roofs or pool buildings to offset daytime demand
- **Battery storage:** Flatten peaks and use cheap-rate energy
- **Low-carbon heating:** Replace boilers with heat pumps at end-of-life
- **Insulation:** Improve envelope performance in older sites
- **Equipment upgrade planning:** Keep a rolling list of inefficient or end-of-life kit – replace for energy-rated models with smart control
- **Metering:** Sub-meter pools, gyms, and studios to track usage patterns



BEHAVIOUR: SMALL FIXES, BIG DIFFERENCE

YOUR TEAM MAKES THE STRATEGY REAL.

Frontline staff are the ones who operate the systems. A smart energy plan needs buy-in, awareness, and action from your team – from reception to pool plant to cleaning crews.

KEY BEHAVIOURS

- **Switch-on/off routines:** Don't default to 'on from open'. Use schedules, protocols, and real-world usage.
- **Pool cover discipline:** Ensure it's someone's job at every shift change.
- **Lights out** in unused studios, halls, and back-office areas
- **Report faults:** Leaking taps, broken thermostats, doors that won't close
- **Laundry habits:** Full loads only, use low-temp cycles where safe
- **Challenge inefficiency:** Create a culture of asking "do we need this on?"

BUILDING THE CULTURE

- **Include energy awareness** in staff inductions
- **Use signage:** "Pool cover = £27k/year saved" or "Only turn on if needed"
- **Share performance monthly:** "£120 saved this month = new yoga mats"
- **Nominate energy champions** across teams and shifts

YOUR CHECKLIST

Area	Action	Impact
Pools	Cover pool, use heat pumps	Lower heat loss, reduced demand
Gym	Unplug unused treadmills off-peak	Reduce energy waste in quiet times
Lighting	LED upgrade + sensors	Major reduction in running costs
HVAC	Schedule by use, not hours	Better comfort, lower usage
Sauna/Steam	Use timers, reduce standby time	Save on high kWh demand areas
Staff	Induction, signage, shift checks	Long-term behaviour change
Kit Review	Replace with efficient models when due	Lower usage, better user experience



Need Support? Let's Talk

At PE, we specialise in helping sports and leisure centres run smarter. We work with operators to reduce bills, cut carbon, and maintain great experiences for every member.

Email :
Sustainability@pe.solutions