

EECA

Energy Efficiency Checklist

Hotels

Cost-saving measures, productivity enhancements, and optimisation opportunities



This energy efficiency checklist is a practical guide to help hotel and motel staff optimise and track energy efficiency opportunities. This document has been developed with the industry as part of the Sector Decarbonisation Programme at the Energy Efficiency & Conservation Authority (EECA) a government agency that supports mobilising New Zealanders to be world leaders in clean and clever energy use.

This checklist sets out low-no cost energy efficient opportunities which can be taken when embarking on a process towards optimising your hotel.

Before you start this guide, you can set the foundations and start with purpose by:

1. Putting in place a climate action plan, meeting regularly to report on actions and get feedback from staff and guests around how to improve your performance.
2. Put in place a system to measure your energy and carbon emissions. If you do not fully understand your usage it will be difficult to make informed decisions about making savings.
3. Assign energy management responsibilities to staff.
4. Maintain an updated action list of energy efficient opportunities.

Energy Efficiency Checklist

TASK & DETAIL	COMPLETE?
RECEPTION AND OFFICE TASKS	
Set energy savings measures on computers & screens so they turn off after 5-10 minutes and ensure automatic sleep/power-off timer for printers. Shut down all computers completely at the end of the day.	
Switch main staff room equipment OFF after use where possible – get automatic shutdown sockets.	
Cool server rooms to no less than 22 degrees.	
Ensure main entrance door is kept closed to avoid loss when heating and cooling.	
Provide relevant information on steps for energy efficiency to hotel guests on their arrival.	
Create a mechanism for guests or employees to share their suggestions with you. Make sure you respond to comments and act on recommendations when feasible. You could even offer a reward for the best energy-saving ideas.	
Print and hang banners, posters, and signs with energy-saving messages in high-traffic areas like lobbies, elevators, hallways, gyms and in break rooms.	
Allocate room occupancy in clusters and in areas that are most energy efficient.	
Use digital registration cards to save on paper registration cards.	
Email receipts / invoices to guests following their stay as opposed to printing.	
Establish a battery recycling program to collect used batteries from around the property.	
Ask long stay guests how frequently they would like their room serviced, change of linen every 3 days or longer.	
HOUSEKEEPING AND LAUNDRY TASKS	
Ensure shower and bathroom taps are not dripping and inform maintenance of any leaks.	
Turn lighting off in unoccupied rooms.	
Consider the settings used in a room pre-check in and if a certain lighting option and TV setting is required.	
Close windows in bedrooms and other areas when leaving if the heating/cooling system is on.	
Ensure lighting and power is OFF after the guest has checked out.	
Ensure air conditioning and fans are on 'eco' mode and/or the right setting (note: set an agreed setting with all staff).	
Turn off or use smart plugs on appliances that are commonly left on standby mode (DVD players, TV's).	
Switch OFF electric panel heaters or floor heaters in guest rooms after occupation. Note: Use signs/notes to remind guests to turn off after use.	
Wash loads at lower temperatures and increase air drying if possible (saves money & increases lifespan).	
Run only full loads to minimise frequency of operation.	
Ensure the water temperature and amount of water are in accordance with manufacturer's instructions.	
Turn off lights and ventilation/air-conditioning when laundry not in use.	

TASK & DETAIL	COMPLETE?
Turn off appliances, heating & lighting in rooms/blocks that are not being used.	
Ensure mini-bar fridges are de-iced regularly to improve operating efficiency.	
Partner with external suppliers to reduce plastic packaging for department e.g. linen provider, drycleaner, consumables supplier etc.	
Utilise refillable room amenities wherever possible.	
For long stay guests, implement a 3-day cleaning – where linen & towels are changed every 3 days and straightened on days in-between.	
Give guests the option to pass on having their room serviced, sheets changed, towels replaced – communicate this with collateral and/or on check in.	
MANAGEMENT TASKS	
Take ownership across all employees; ensure commitments are led by example.	
Create a mechanism for employees to share their suggestions with you. Make sure you respond to comments and act on recommendations when feasible. You may even offer a reward for the best energy-saving ideas.	
Educate staff about the importance of being as energy efficient as possible, managing hot water use and turning off equipment when not in use.	
Empower staff to establish their own departmental green teams. Check out the ENERGY STAR Green Team Checklist for steps on how to do this.	
Encourage actions that apply to most of your employees' workspaces, or that can be practiced at work and at home, like turning off lights when not in use and activating computer power management features.	
Create door hangers, post-it-note reminders, or light switch covers to help occupants or employees remember to take action.	
Replace single serve toiletries with toiletries in refillable dispensers & develop a site wide recycling policy.	
Host a lunch and learn session, or present about why it's important to save energy at staff meetings and get-togethers. You can also integrate information about your energy programme into staff orientation training.	
Give incentives and recognition. Consider starting small with something like a pizza party, breakfast, or other reward for hitting goals. Depending on savings levels, you may also consider awarding vouchers for great energy-saving ideas or to energy champions.	
Share your energy efficiency goals. Transparency is the first step to getting the people inside your hotel interested in what you're doing. When you share your energy reduction goals and progress toward saving, employees and guests sit up and take notice of your efforts.	
Try to ensure the guest room energy-management system can interface with your building-management system.	
Monitor energy consumption (electricity, natural gas, LPG) as well as water usage regularly to identify any unexpected increases.	
Compare monthly energy consumption data to the same month a year prior and on a rolling 12-month basis to identify trends (i.e. increasing/decreasing energy consumption).	
Gain New Zealand and/or global sustainability certifications to demonstrate the good work you do and display this for guest awareness.	
Engage with all team members, make it a part of daily vocabulary, daily briefings and team meetings. Continue to educate yourself and the teams on industry energy efficiency developments and advancements in new technologies.	

TASK & DETAIL	COMPLETE?
Benchmark your operation against others within the industry, adopting the best practice operations into the property.	
Review less occupied non-hotel room areas of the premises for electrical loads, such as corridors, toilet areas, and outdoor areas, and consider the use of daylight switches or occupancy sensors.	
ASSET REGISTER	
Develop asset register capturing key details, such as; <ul style="list-style-type: none"> • Make • Model • Type of unit (i.e. crew or reciprocating) • Age/ year of install • Power rating • Efficiency • Operating temperatures 	
Implement asset replacement strategy focusing on more energy efficient replacements of equipment in register.	
CHILLER & WATER MAINTENANCE	
Ensure chillers are on time schedules when starting the chillers to avoid/reduce maximum demand charges on electricity.	
Frequently clean strainers and filters to ensure the optimal heat transfer in the condenser can be achieved.	
Do not let the chilled water supply temperature fall below the stated design value in the owner's manual (typically 6-7°C).	
Avoid operating chillers under light load conditions.	
Frequently clean the condenser and evaporator tubes to optimise the heat transfer rate and reduce power consumption (monthly depending on weather conditions).	
In summer raise the set point of the chilled water supply temperature in accordance with the decrease of the building load.	
HEATING & VENTILATION MAINTENANCE	
Implement preventative maintenance programmes and appropriate scheduling to regularly perform basic energy maintenance by a qualified technician.	
Put a proactive leak management and refrigerant containment strategy in place.	
Implement controls on Extract Fans, in conjunction with Fresh Air Unit. Implement Controls on Fresh Air Unit, with VSD and Setback Mode.	
Control the amount of fresh air supplied to the restaurant and function rooms as required if possible – turn off when not in use.	
Ensure heat pump ducting systems are cleaned annually for good airflow through the registers.	
Clean air filters, fans, and coils in your heating, ventilation, and air conditioning (HVAC) system – replace if need be.	
Keep heaters or heat pumps that are next to windows or doors OFF.	
Reduce fresh air fan speed to the lowest setting.	
Link the HVAC system to the check in system if possible & apply a seasonal reset to the supply of air temperature in the HVAC system.	

TASK & DETAIL	COMPLETE?
Have automatic reset of temperature and mode setpoints & limit temperature settings in guest rooms.	
Clean heat transfer surfaces, including cooling and condensing coils on HVAC system.	
Ensure HVAC system dampers can move freely through entire operating range; clean, lubricate, and repair dampers.	
Avoid operating the heating & cooling systems simultaneously.	
Check air ducts for leaks.	
Adjust outdoor air supply to avoid over and under ventilation – use the demand control method using CO2 sensors for large function rooms or similar spaces.	
Only open windows if there is a need for ventilation or quick cooling. Try to keep windows closed in spaces where HVAC is operating (especially when the HVAC is heating the space).	
Control room temperatures using a dead-band between which neither heating or cooling occurs (this is usually achievable using AUTO function). For instance, set a room to heat to 20 degrees and cool to 23 degrees.	
Avoid situations where adjacent air conditioning controllers operate in different modes (i.e., heating and cooling) when the units are in close proximity (such as twin units or neighbouring rooms).	
For large common area spaces, consider engaging an expert to review ventilation requirements vs actual ventilation levels.	
Ensure any radiators are turned off or down when outside air temperatures are high.	
Guest rooms can operate their fan coil units at 15 minutes intervals with fan cycling control to reduce energy and prevent moisture.	
In multiple-zone HVAC systems, identify any rogue zones that cause the reset of system-level setpoints and modify HVAC system controls to implement night precooling.	
<p>In spaces which are occupied for part of the day:</p> <ul style="list-style-type: none"> • Set timers to switch on HVAC systems 1 hour before the space is occupied. (You can test the time that’s required to heat or cool the space to reach the desired temperature). • Turn off the system shortly after the last occupant has left the space. 	
Ensure external doors can close automatically to prevent excess conditioned air from leaving the building.	
Review options of changing to natural refrigerants that have very low Global Warming Potential.	
Ensure the responsible containment and destruction of refrigerants.	
LAUNDRY & KITCHEN MAINTENANCE	
Use a qualified gasfitter to check the gas equipment every 3 months to avoid gas leakage, and emission of carbon monoxide.	
Ensure steam pipes (washing machine, ovens, dryers) are properly insulated to reduce heat loss & improve efficiency.	
Remove lime deposits regularly from tanks, heater coils, and spray nozzles in dishwashers.	
Consider using variable speed extraction systems to reduce wasted energy by adjusting the fan speed to the rate of extraction required.	
Ensure all steam traps operate efficiently and traps are leak free.	

TASK & DETAIL	COMPLETE?
Operate washing machines and dryers with full loads to minimise number of operations & ensure that water temperature and amount of water used are in accordance with the washing machine manufacturer's instructions.	
Ensure cleaning, dishwashing, washing, and laundry practises minimise hot water use as much as possible.	
Ensure that oven doors are closed as much as possible, and burners are only switched on when cooking – limiting kitchen heat will also reducing air conditioning requirements in summer.	
Check and regularly clean the dryers' filters & ensure the correct maintenance and adjustment of laundry machines.	
For existing refrigerators, clean refrigerator coils at least twice a year and replace door gaskets if a dollar note easily slips out when closed between the door's seals.	
For refrigerated storage, examine walls and ceilings for evidence of frost build up and make repairs if needed.	
Maintain chillers and freezers regularly to sustain compressor efficiency and limit refrigerant leakage. Check that temperatures are as expected.	
BMS Installation and Commissioning - Enable BMS to display chiller settings and trend logs and engage a skilled refrigeration technician to tune and optimise these parameters on a regular basis (6 month – year).	
Schedule kitchen air conditioning and ventilation operations to match to hours of kitchen operation (i.e., there is generally no need to air condition a kitchen space overnight).	
Reconfigure kitchens so that heating appliances (e.g., ovens) are not next to cooling appliances (e.g. fridges or freezers).	
BOILER MAINTENANCE	
Check boiler weekly for any fuel leakage, and for any carbon monoxide smoke.	
For condensing boilers or low temperature boilers, try to run at the lowest temperature possible. In contrast for standard boilers, don't try to reduce the temperature below 70°C (aim for 60-65°C).	
Ensure water treatment is well maintained to reduce scaling.	
SWIMMING POOL/SPA MAINTENANCE	
Switch OFF the outdoor swimming pool water pump and drain the swimming pool during winter.	
Verify that heaters are functioning properly by regularly checking water temperature.	
Ensure backwash chamber is replaced and/or cleaned every 6 months to maintain filtration efficiency.	
Ensure large water jets are set on a timer as opposed to continually.	
Install a sauna timer control.	
Use a pool cover during unoccupied hours. This reduces evaporation which means less energy is required to maintain the pool temperature, and it also results in less moisture in the air which reduces ventilation requirements.	
Reduce the operating hours of the pool if possible.	
For larger indoor pool areas, consider engaging an expert to review ventilation requirements vs actual ventilation levels and to assess if heat recovery is a viable option.	
Consider heat recovery from warmer extracted air to pre-heat incoming cooler outside air.	
Check the spa pool cover is securely in place when the spa is not in use.	

