

# Motorcycle Repairer and Dealer

## *Automotive Industry Energy Efficiency Project*

*Motorcycle repair and dealerships are considered moderate energy users when compared with the automotive industry average; with lighting and the air compressor being the major energy contributors. An audit of motorcycle repair and dealership businesses identified that an average motorcycle repair and dealership business uses 53,645kWh of electricity a year. That is an average cost of \$13,895 per year, almost half of the industry average.*

*There are still many energy saving opportunities that can be made, which could potentially help motorcycle repair workshops and dealership businesses achieve further financial savings.*

## *Major energy users*

### *Lighting*

All businesses could reduce the amount of electricity being used by making smarter choices on lighting.

There are many improving lighting technologies such as fluorescents and LED lighting that could improve your business' efficiency. Lighting used for security and marketing purposes is often left on throughout the day unnecessarily, wasting both energy and money.

*Quick and affordable tips to save energy:*

**Install sensors** – One of the easiest and smartest ways to reduce your energy consumption is to install timers or sensors on your lighting. This will curb the businesses use of artificial lighting and also reduce your electricity bills. For example, an area with ten twin fitting 36W T8 fluorescents controlled with motion sensors can save you up to 1200kWh per year. At the end of the day, low cost timers and sensors is just smart business!

**Regularly clean skylights** – Having skylights in workshops, showrooms and offices are a bonus many dealerships don't utilise or notice, especially when they are dirty. Clean skylights can provide plenty of natural light throughout the day, particularly during summer, minimising the need for artificial light.

**Display switch off signage next to light switches** – This is an easy and cheap way to reduce energy consumed by lighting. Displaying signs next to switches will remind everyone to turn off the lights when leaving an area or room. Don't underestimate the simplest of initiatives; as little reminders help people, when trying to change inefficient habits.

**Replace inefficient lighting**—Assess the current lighting and replace with more efficient choices that are suitable to your business. The below table outlines the energy savings a motorcycle repair workshop and dealership business achieved in regional Victoria, when a few lighting changes were made.

Existing lighting	Energy Saving Opportunity	Savings (kWh) / (\$) per year	Pay back period
8 x 400W high bays	LED, T5 or induction high bays	5370kWh / \$1280*	2.5 years

*\*Calculated savings (\$) may vary depending on the business' electricity rates*

### **Air Compressor**

Air compressors are one of the most inefficient pieces of equipment in the workshop; with approximately 90% of the energy input becoming waste heat.

*Quick and affordable steps to save you energy:*

**Check for leaks** – It is important to perform routine maintenance, to detect for any leaks in hoses and coupling, pipes and pipe joints, pressure regulators and threaded fittings. A hole as small as 0.8mm can cost your business over \$100 per year if left unrepaired.

**Purchase an air compressor that is the right size for your business**—When it comes to replacing your air compressor, it is important to consider what you are using it for. Air compressors should run as closely to a full load as possible. In some instances having several smaller sized compressors may be more beneficial than having one large compressor. Purchasing a compressor that is bigger than required will cost you more money to run.

**Turn off the air compressor when not required**—As basic as that sounds, air compressors are often left on after hours cycling on and off. To avoid having the air compressor running at night or on the weekend, install a 365 day time clock to control the running of the air compressor.

**Reduce the system pressure**— Running an air compressor with a pressure that is too high can damage the equipment as well as increase energy usage. Businesses can potentially save on electricity bills if they assess the pressure settings, and adjust it to run in line with the equipment that requires the highest pressure.

**Recover the waste heat**— With up to 90% of the energy used by an air compressor becoming waste heat, recovering the waste heat to heat water can provide significant energy saving opportunities. During winter there are further opportunities to use the waste heat to heat air, reducing the need for heaters.

### ***Kitchen Appliances***

There are many quick and affordable ways to reduce the energy consumed by kitchen appliances used by staff in the business.

*Quick and affordable steps to save you energy:*

Check temperature settings on fridges and freezers – Freezers should be set between  $-18^{\circ}\text{C}$  and  $-20^{\circ}\text{C}$ ; and fridges should be set between  $2^{\circ}\text{C}$  and  $4^{\circ}\text{C}$ . It is also a good idea to keep fridges in a well ventilated area and away from heat sources, such as a heater. This is so that the fridge doesn't work harder than it should to maintain its temperature.

**Install a time clock on kitchen appliances**—Installing a time clock to switch off kitchen appliances, such as boiling water dispenser or water cooler, at night can save you approximately 150kWh of electricity per year.

**Look for the energy star rating when purchasing new kitchen appliances**—Appliances such as a fridge generally have a lifespan of 15 years. By taking into consideration the energy star rating, you could save money in the long run by reducing the operating costs.