



ENERGY COSTS

THE BURNING ISSUE FOR BODYSHOPS

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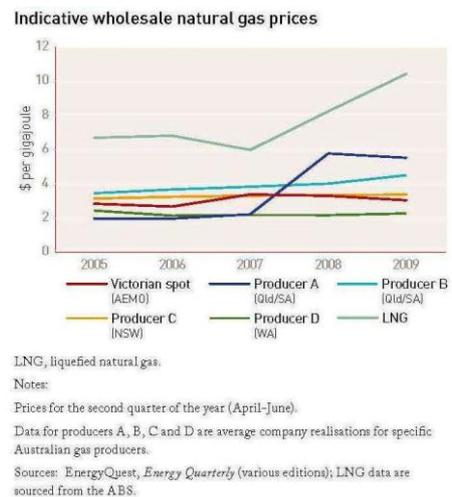
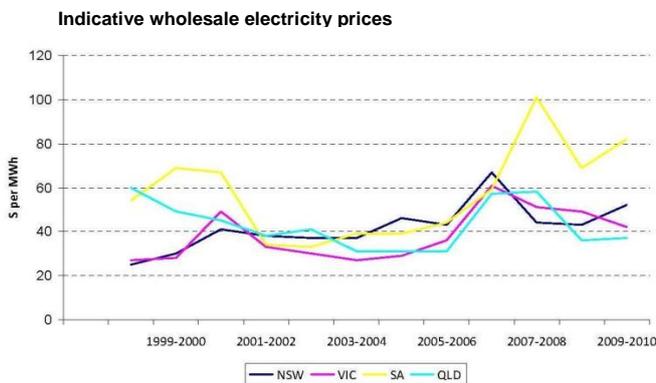
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There are few, if any industries throughout Australia that have not been badly affected by soaring increases in energy costs. The accident and collision repair industry is no exception. With spray booth ovens to run, body shops consume a great deal of energy relative to the size of their business. With mounting energy bills the average body shop's profits have been hit particularly hard. In a sector where margins are traditionally tight, the pain of spiralling energy prices is being felt even by the larger operators.

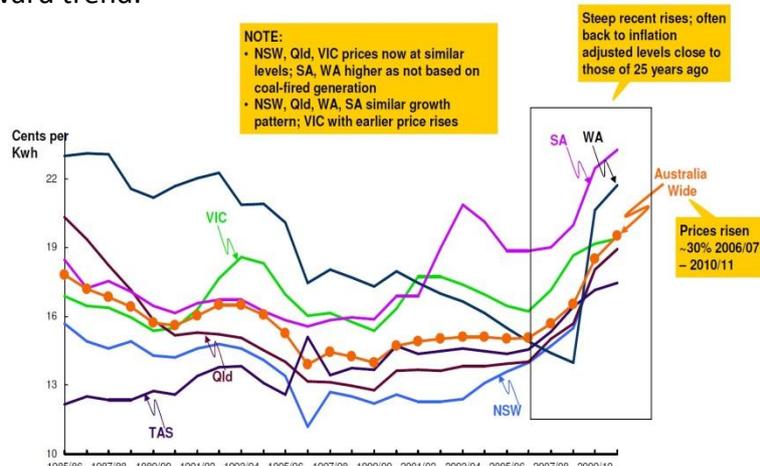
Australia can already lay claim to having some of the highest energy costs in the world. So, what are the causes behind the seemingly never-ending upward trend in gas and electricity costs and why are the increases so substantial?

WHOLESALE MISERY FOR ENERGY USERS

As the chart below shows, the wholesale price of gas and electricity has increased rapidly since 2003/04. The wholesale markets are where energy suppliers buy the energy their customers require from power station operators and gas producers. Of all the elements that make up your gas and electricity bills, the wholesale cost accounts for around 70%. Although the trend in the graph shows a slight levelling off of prices from 2010 onwards, these prices have continued on an upward trend with no sign of returning to the lower prices of the early 2000's.



The chart below shows the average prices for electricity throughout Australia and shows the recent dramatic upward trend.



Source: www.aigroup.com.au – Energy Shock – Confronting higher prices Feb 2011

POWER COSTS SURGE AHEAD

ENERGY COSTS IN AUSTRALIA PREDICTED TO RISE BY 18% OVER THE NEXT YEAR

There seems to be no relief in sight for electricity users. Around 85% of Australia's electricity is produced by coal fired power stations. Operators of these facilities claim a doubling in their spending commitment to achieve carbon emission reduction targets. In addition, the price of coal has also been rising. These increased costs are inevitably reflected in higher electricity prices.

THE IMPACT OF HIGH ENERGY COSTS ON BODYSHOP PROFITS

In most, if not all bodyshops, the spray booth is by far the biggest consumer of energy. In fact, the paint finishing operation, including compressed air and dust extraction processes can account for as much as 90% of the typical bodyshop's overall fuel consumption, with workshop lighting, office heating and cooling and general power requirements making up the balance.

By any measure, 90% is a huge proportion of energy used – but it also presents a huge opportunity to improve energy efficiency, reduce consumption, cut energy bills and increase profit!

Analysts in the accident repair industry recently calculated that the average net profit per car repaired is only around the \$80 mark. Even a modest saving in the energy consumed per car can therefore result in a big percentage on the bottom line.

ENERGY EFFICIENCY MAKES THE DIFFERENCE

The fuel and electricity required to run a spray booth oven can cost, on average, between \$3 and \$40 per top-coat job. That cost increases exponentially when a job also requires high build primer. Why such a huge difference between the bottom and top end figures? It all depends on the performance and energy efficiency of the spray booth equipment you use.

Quite simply, the more efficient your spray booth, the more energy you save, and the more money you make – as the typical example below clearly illustrates.

How much could you save? Below are the proven savings over 5 & 10 years when comparing a modern down draught booth to a Junair direct gas fired spray booth with energy saving technology.

Spray Booth Running Cost Comparisons

Based on 25 jobs per week in an average spray booth oven
(Energy costs as at 2012)

	\$ Topcoat	Cost Week	Cost Year	Cost 5 Years	Cost 10 Years
Direct gas fired spray booth. No energy saving technology	\$12	\$305	\$14,600	\$73,000	\$146,000
Spray booth Ovens with Junair Technology	\$ Topcoat	Cost Week	Cost Year	Cost 5 Years	Cost 10 Years
Booth with QADs™	\$7	\$185	\$8,925	\$44,625	\$89,250
Booth with QADs™ + VAT + FS	\$4	\$110	\$5,155	\$25,770	\$51,540
Potential Savings	Savings per Topcoat	Saving Week	Saving Year	Saving 5 Years	Saving 10 Years
Booth with QADs™	\$5	\$120	\$5,675	\$28,375	\$56,750
Booth with QADs™ + VAT + FS	\$8	\$195	\$9,445	\$47,230	\$94,460

Key

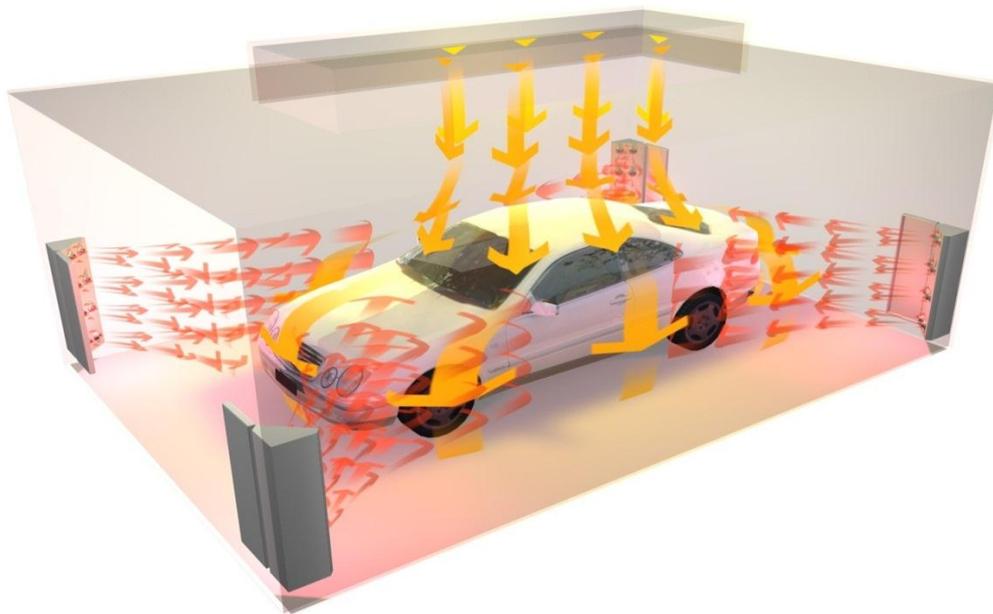
QADs™ - Auxiliary Air Movement system

VAT – Variable Airflow Technology

FS – Fuel Saver mode

SAVE ENERGY & INCREASE REVENUE WITH JUNAIR TECHNOLOGY

Whether you want to improve the efficiency of an existing spray booth, replace an old and inefficient booth or invest in the latest spray booth technology as part of a new bodyshop venture, there are a number of ways you can reduce your energy consumption and save money.



QADs™ supplies additional air flow from the corners of the spray booth cabin. The high velocity, turbulent and heated air envelops the whole vehicle including the lower panels, ensuring that the recommended air and panel temperature is achieved quickly. As explained further on, there is no disturbance of dust on the floor and therefore no contamination.

QADS™ AUXILIARY AIR MOVEMENT SYSTEM

Designed to aid the drying of waterborne base coats and shorten bake times, auxiliary air movement is one of the most important advances in spray booth energy efficiency and productivity. In contrast to the laminar airflow from the spray booth ceiling input plenum, QADs™ deliver high velocity, filtered, dry and heated air through nozzles mounted at low levels in the corners of the cabin. The additional auxiliary airflow disrupts the laminar airflow over the vehicle or panel thus speeding up the flash off and curing process.

Junair's innovative patented QADs™ system leads the world in auxiliary air movement technology. Designed for use with coatings that comply with stricter environmental directives, the QADs™

system reduces overall paint drying and curing process times by around 35% and energy consumption is reduced by 40%. With QADs™ the baking temperature can also be set lower as the system is much more efficient at getting heat from air into the vehicle panel.

Unlike other systems that require manual intervention, QADs™ are fully automatic and cover the whole vehicle in one operation. This ensures consistent, defect free drying of waterborne base coats. Located in the corners of the booth, the optimum position for effective auxiliary air movement, QADs™ nozzles are set so as to not direct air movement below vehicle panel level. So there is no risk of air lifting dirt from the floor which can lead to paint defects.

QADs™ are not just available in any new Junair spray booths; they can also be retro-fitted in any make or model of spray booth oven.

VARIABLE AIRFLOW TECHNOLOGY (VAT) INCREASES ENERGY EFFICIENCY

Even greater savings can be made in energy consumption when an auxiliary air movement system such as QADs™ is installed with Junair's Variable Airflow Technology. In a Junair spray booth with auxiliary air movement, full air flow is required only for the spraying mode. All other activities including load/unload, cleaning and final masking, flash-off and baking can be carried out with a lower airflow.

50% LESS AIRFLOW = 50% LESS FUEL USED

VAT utilizes variable speed drives automatically vary the airflow in the cabin to match process demands, further reducing cycle times and energy usage.

VAT is fully automatic, eliminating the risk of operator error, ensuring that the correct speed settings are used at all times. Junair variable speed drives have four individual speed settings. This means that our technology consistently achieves higher energy savings than our competitors.

AUTOMATIC AIR RECIRCULATION REDUCES RUNNING COSTS

Further savings can be achieved with the addition of an automatic air recirculation system. Junair's Fuel Saver Mode determines when a booth requires full fresh air intake (i.e. the paint application process) and automatically switches to recirculation mode for idle, loading/unloading, cleaning/final masking, flash off and bake.

Fresh air drawn from an external source has to be heated to spraying temperature before it can be supplied to the cabin. So, the more heated air that can be recirculated, the greater the fuel savings you can achieve. With Fuel Saver Mode, 10-20% fresh air is used with 80-90% being filtered and then recirculated through the cabin. This can result in energy savings amounting to tens of thousands of dollars over the lifetime of the spray booth.

CONVERT FROM INDIRECT TO DIRECT GAS FIRING

If you're a natural gas or LPG user, you'll have the choice of an indirect or direct fired spray booth. In indirect fired systems, the burner fires into a combustion chamber which is connected to a heat exchanger. The hot combustion gasses pass through the heat exchanger and are discharged through a flue to atmosphere. In other words, much of the fuel energy used in this process literally goes up the chimney as wasted heat.

Direct fired systems remove the heat exchanger from the process. Instead of being wasted, combustion gases are used in the heating process. Compared with indirect fired systems, it is estimated that a direct fired spray booth saves approximately 30% in fuel energy costs.

If you presently use diesel/oil fuel (indirect fired burner) you are paying up to \$40 per booth cycle (per job). You could save a small fortune by converting to a gas, direct fired system coupled with Junair productivity enhancing and energy saving technology.

A RAPID RETURN ON INVESTMENT (ROI)

All of the energy saving features detailed here have been developed for the new, technologically advanced Junair spray booths available today. Whilst investing in a new spray booth equipped with some, or all, of this technology is bound to mean higher capital cost, the energy savings can be calculated and verified to show just how quickly the extra outlay can be recovered (ROI).

With energy prices set to continue rising for the foreseeable future, the savings you can achieve will only increase which in turn further reduces the payback period.

FREE ENERGY EFFICIENCY SURVEY

Could you make substantial savings on your energy costs?

Contact us at sales@junair.com.au and we will send you an Energy Survey to complete and return and we will get back to you with our advice. It's a free service with no obligation whatsoever. The form will only take you a few minutes to fill out but it could save you a small fortune in energy bills.