

# CHOICE

**203**  
products  
TESTED

Fridges  
Toasters  
Fuel apps  
Tap timers  
E-readers  
Microwaves  
Espresso machines  
Food processors  
& more

**ALL ABOUT  
VALUES**

Ethical shopping  
on a budget



*Clean  
& green*

Bathroom  
and laundry  
makeover

**POWER  
DOWN**

Tips to cut your  
electricity use

## PURPOSE POWER

Considering the impact of what you buy

**Plus** Pet scams, plastic recycling & carbon offsetting

# For your consideration

## Shoppers are looking beyond just price

**T**he idea of buying things is central to CHOICE's existence. In 1960 when our organisation launched, consumer markets were exploding as people's incomes grew and major household appliances were becoming affordable for the first time. People were keen to use their new buying power, but they needed help in a world where they had few consumer rights.

More than 60 years on, there's a shift to a more considered form of consumption, as many people think about the environmental impacts of the things they buy. But working out which is the most sustainable choice isn't always easy – and the research tells us that many people who care deeply about the environment are confused about what they can do to have the greatest impact.

That's not surprising, because these decisions are often neither obvious nor simple. Even everyday purchases like fruit and vegetables present some interesting conundrums. Lots of people quite rightly question why fresh fruit and vegetables need to be wrapped in plastic. But in some circumstances, wrapping fresh food makes it last much longer, reducing food waste. Which is more harmful – more plastic in landfill or the impact

of food that has been produced and shipped but not consumed?

There are similar dilemmas in food production, where businesses that hold patents for genetically modified organisms point to lower pesticide use and the potential of drought-resistant crops, while many others worry about the impact of GMO on human health and biodiversity.

If looking for an ethical investment, you'll find yourself confronted with a broad range of approaches. Some ethical funds completely avoid investment in activities like coal-fired power production while others are activist investors, deliberately taking a small stake in some activities that harm the environment in order to drive change from within.

In one sense, these are unfair choices. Ultimately, business practices should evolve to make more sustainable choices accessible, without the need for major compromises. We need supermarkets to use all the data they're collecting to reduce food waste through better supply chain management. We need to support the development of new strains of crops that aren't dependent on GMO. And we need the shift to renewable energy to be driven by strong government policy rather than relying on investors.



I hope those changes aren't too far away. Meanwhile, we'll keep doing our best to help, recognising that these are often very personal choices, influenced by your means, personal values, health conditions and where you live.

Our role is still all about choices, as it was in 1960. And by helping you make them, we have the opportunity to help create a more sustainable world for all.

Alan Kirkland, CEO  
Email: [alan@choice.com.au](mailto:alan@choice.com.au)  
Twitter: @AlanKirkland

## CHOICE

CHOICE gives you the power to choose the best goods and services, and avoid the worst. Wherever possible, we pay full price for the products we test, so we remain 100% independent. We don't take advertising or freebies from industry. We're not a government body and our consumer publishing and advocacy is almost entirely funded by membership. Memberships include online access and services such as CHOICE Help. CHOICE product ratings are based on lab tests, expert

assessments and consumer surveys. CHOICE staff also research a wide range of consumer services. They reveal the truth behind the facts and figures, and investigate the quality and the claims. **BECOME A MEMBER** To review the full range of membership options and benefits go to [choice.com.au/signup](http://choice.com.au/signup). **MEMBERSHIPS/RENEWALS** Call 1800 069 552 or email us at [ausconsumer@choice.com.au](mailto:ausconsumer@choice.com.au).





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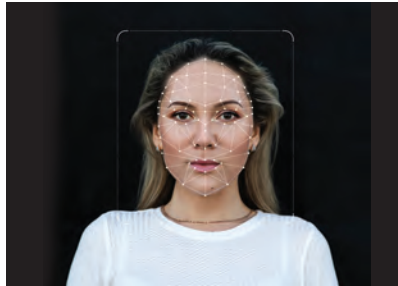
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CHOICE magazine provides a selection of our top product reviews. We can't always include all the models we've tested, but you'll always find the products that scored the best. To view complete results for all our tests, go to [choice.com.au](http://choice.com.au), or call Customer Service on 1800 069 552 to add full online access to your membership package.

The latest consumer news in brief  
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## Telstra late to the party on landline repairs

**T**elstra's compliance with compensation rules will be independently reviewed after the telco delayed payments of more than \$11 million owed to tens of thousands of customers.

The Australian Communication and Media Authority (the ACMA) says Telstra failed to meet rules that dictated the timeframe around landline connections and repairs, and the mandatory compensation if those timeframes aren't met.

An investigation found that between July 2017 and June 2021 Telstra failed to accept they were liable to pay compensation on over 67,000 occasions.

"Telco customers are entitled to compensation to make up for delayed connections or fault repairs of their landline," says the ACMA chair Nerida O'Loughlin O'Loughlin. "Telstra has let down its customers by not paying compensation in a timely manner."

Telstra has now paid the affected customers the money owed and has committed to implementing timely compensation payments via a court-enforceable undertaking.

**JARNI BLAKKARLY**

## Sunshine Loans heading to court

**T**he Australian Securities and Investments Commission (ASIC) is taking payday lender Sunshine Loans to court for charging borrowers a fee to reschedule repayments, a tactic that's not allowed under the National Credit Code.

The \$35 fee for making the change is the same amount the company charges for missing a scheduled payment.

"These fees were charged to people who had engaged with Sunshine Loans due to their inability to pay, and it stinks that they are being punished for this with a \$35 fee," says Tom Abourizk from the Consumer Action Law Centre. "[It's] just another eye-watering example of payday lenders trying to squeeze every last cent out of customers."

The business models of payday lenders are often designed to circumvent existing consumer-protection legislation. Consumer Action is calling on the federal government to impose reforms on the industry to prevent payday lenders from "pushing people into a debt spiral".

ANDY KOLLMORGEN



## Ombudsman slams slack solar safeguards

**T**he NSW utilities ombudsman is warning that consumer protections for renewable energy customers are failing to keep up with the number of people taking up solar panels and batteries.

The Energy & Water Ombudsman NSW (EWON) says there aren't enough specific protections for solar customers in the National Energy Consumer Framework (NECF), and the growing number of customers using these technologies are falling through the cracks.

"Most complaints about solar fall beyond the scope of NECF protections, and customers are often unable to access free and fair schemes such as EWON," says ombudsman Janine Young. "Instead, they are left to navigate a complex and confusing external dispute resolution journey when things go wrong."

Young says action is needed: "Collaboration between governments, regulators and stakeholders like EWON is essential to prevent a two-tier energy market which protects some customers and not others."

EWON reports that since 2018, solar issues have featured in more than 10% of the quarterly electricity complaints it receives.

LIAM KENNEDY



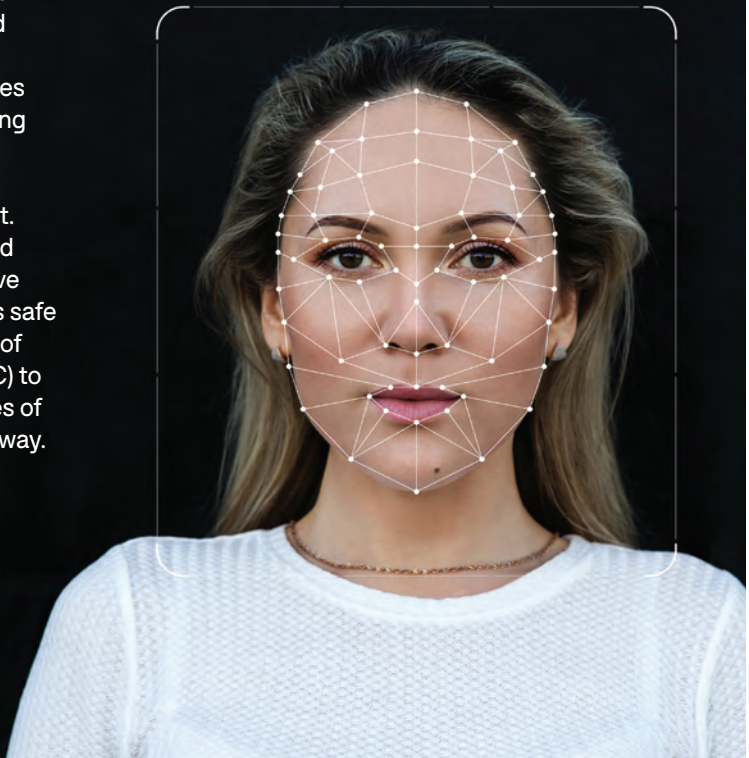
## Facial recognition

In June, CHOICE released an investigation that revealed major retailers Kmart, Bunnings and The Good Guys were using facial recognition in their stores. This developing technology captures and stores a customer's unique 'faceprint', raising serious privacy concerns. People shouldn't be forced to give up their sensitive data to buy a hammer from Bunnings or clothes from Kmart.

We believe that businesses have not indicated clearly to customers where or how their sensitive biometric data is stored, nor if the technology is safe enough to use. This is why we asked the Office of the Australian Information Commissioner (OAIC) to investigate these retailers for potential breaches of the Privacy Act. This investigation is now underway.

In a welcome first step, The Good Guys has announced it will pause use of facial recognition while the regulator investigates. We hope that other retailers will follow The Good Guys' lead. The overwhelming response we've received from people is that they do not want this invasive technology used in retail stores.

JORDAN CORNELIUS



## Government commits to regulate Buy Now Pay Later

Assistant Treasurer and Minister for Financial Services Stephen Jones has announced that the federal government will regulate the buy now, pay later (BNPL) industry by the middle of 2023.

The development follows the submission of a joint statement by CHOICE and other consumer advocates, and signed by more than 15,000 people, that calls on government regulation to stop BNPL companies evading crucial consumer protections.

This is an important step towards preventing BNPL providers from selling loans that put people in financial hardship, and it would have not been possible without your support. Thank you for making your voice heard.

If you still haven't signed the joint statement, it's not too late. Head to [choice.com.au/jointstatement](https://choice.com.au/jointstatement) to show your support.

YELENA NAM



## Australia and NZ team up to fight scams

**C**ommunications regulators in Australia and New Zealand will boost joint efforts to combat spam and scam calls and messages to consumers.

The ACMA and New Zealand's Department of Internal Affairs signed the Memorandum of Understanding to enhance information sharing and engagement.

The ACMA chair Nerida O'Loughlin says the two countries share many of the same challenges when it comes to reducing spam and SMS scams.

"Just about everyone with a mobile phone or email address will understand the frustration that comes from unwanted spam and scams. Research we conducted in 2021 shows 98% of Australian adults receive unsolicited communications on their phone," she says.

"The recent 'FluBot' malware scam affected both Australians and New Zealanders, and information sharing with our New Zealand counterparts has aided the ACMA's spam and scam work."

**JARNI BLAKKARLY**



## Dodgy investments behind rise in scam losses

**N**ew data shows Australians lost more than \$205 million to scams between January and May this year – a 166% increase from the same period last year – with investment scams responsible for most of these losses.

The ACCC's Scamwatch warns that true losses are likely much higher, saying it believes it's only getting reports from 13% of scam victims. Of the reported losses, \$158 million were due to investment scams, most of which involved cryptocurrency.

With losses to all fraudulent investment schemes up 314% from the January to May period last year, the ACCC is calling on Australians to be sceptical of appealing investments: "We are seeing more money lost to investment scams and so are urging all Australians not to trust investment opportunities that seem too good to be true," says deputy chair Delia Rickard.

Scamwatch also found text messaging has overtaken phone calls as the most common way for fraudsters to contact their victims. Scam phone calls have almost halved since telcos started taking more action to combat them, with new rules to block scams texts expected later this year.

A dramatic rise in pet scams during the pandemic is another factor in the increased losses. See our report on page 38.

**LIAM KENNEDY**

## Kingdom Warehouse warning

**C**onsumer Affairs Victoria (CAV) issued a public warning notice about online retailer Kingdom Warehouse in mid-June, saying the agency had received 300 consumer contacts about the company over the past two years, including more than 140 complaints.

Kingdom Warehouse customers have complained that the retailer of household goods, clothing, electronics, groceries and other items has either failed to deliver goods within a reasonable timeframe or failed to deliver them at all.

The warning was issued on the basis that there are reasonable grounds to suspect that Kingdom Warehouse may be violating the Australian Consumer Law.

In the public warning, CAV director Nicole Rich wrote: "I urge consumers to be cautious about purchasing goods from Kingdom Warehouse. I also urge that any current customers of Kingdom Warehouse be wary of making further purchases and/or payment."

**ANDY KOLLMORGEN**



## Consumer groups call for lemon car ombudsman

**W**ith Victoria's November election fast approaching, consumer groups are urging the state government to make a campaign pledge to commit to a lemon car ombudsman.

Consumer Action Law Centre and WEstJustice Western Community Legal Centre want an ombudsman in place by 2023.

"It's a shocking fact that every year thousands of Victorian families and livelihoods

are shattered because we don't have a fast, accessible and affordable way to resolve lemon car disputes," says Tania Clarke, director of policy and campaigns at Consumer Action.

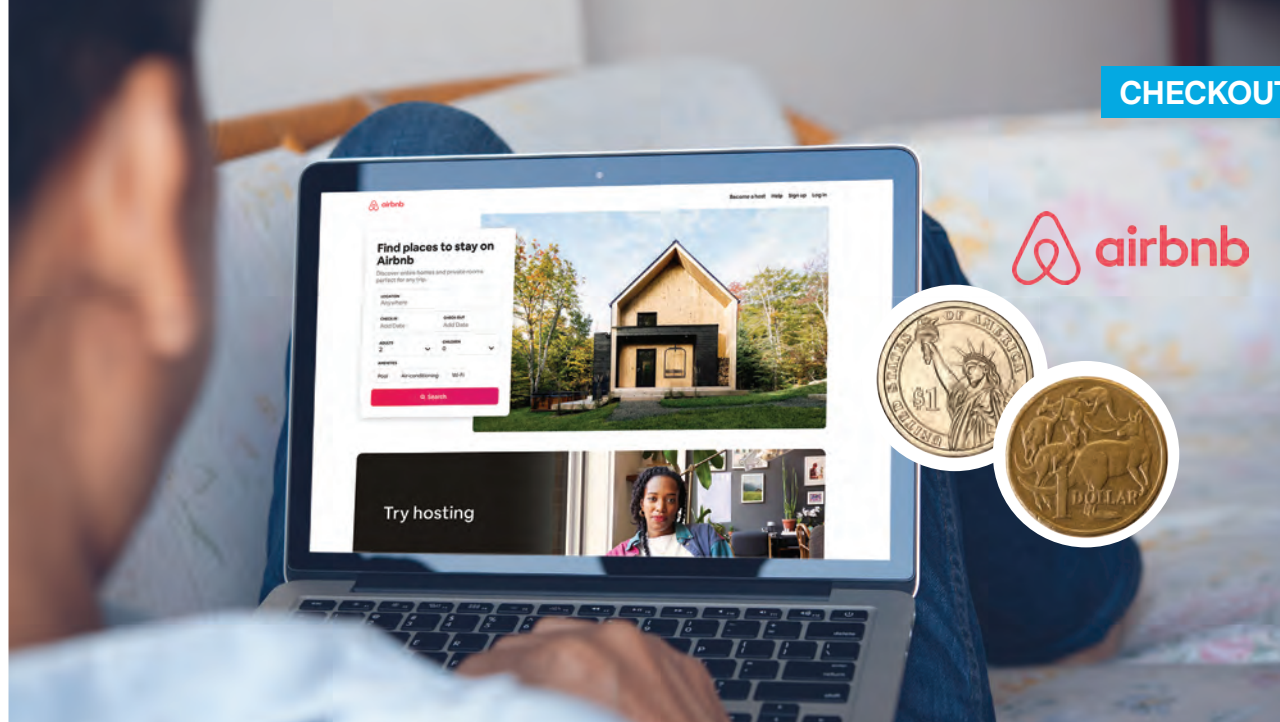
"We rely on our cars for daily life: to get to work, school, health appointments and the shops. Cars can be a crucial part of a safety plan – a way to flee family violence or to evacuate during bushfires and extreme weather

events. In Victoria's regional, rural and outer metro areas that lack public transport, including rural Koori communities, cars are essential."

Around 25 to 30% of all calls to Consumer Action's legal advice line about consumer guarantees relates to defective cars, and Consumer Affairs Victoria receives more than 3000 vehicle complaints each year.

**JARNI BLAKKARLY**





## Airbnb taken to court over dollar debate

**T**he ACCC is taking Airbnb to the Federal Court, accusing the tech giant of misleading thousands of users into thinking the platform's prices were in Australian dollars, when they were actually in US currency.

The Commission alleges the platform made false and misleading representations to Australian customers between January 2018 and August 2021 by listing prices for Australian accommodation using

only a dollar sign (\$), without making it clear that those prices were in US dollars.

The ACCC is seeking compensation for the people affected, who the Commission says ended up paying much more than they'd planned to for a place to stay.

"In addition to paying higher prices than expected, some consumers who were charged in US dollars also found themselves further

out of pocket through currency conversion fees charged by their credit card provider," says ACCC chair Gina Cass-Gottlieb.

The Commission says Airbnb then went on to further mislead customers who complained, by telling many of them it had displayed prices in US dollars because the user had selected this currency, when this was often not the case.

**LIAM KENNEDY**

## CHOICE supports extended ban on high-risk financial product

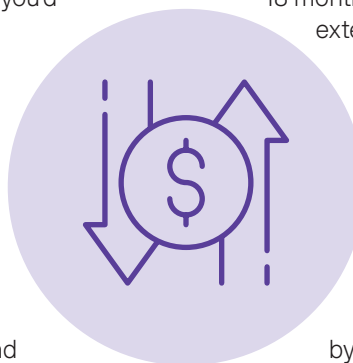
**B**inary options are extremely high-risk financial products that bet on the outcome of an event. If that sounds a lot like gambling to you, you'd be right – these products share many characteristics with high-risk gambling products and regularly result in large losses to consumers.

These risky products serve no meaningful benefit to the Australian community. The Australian Securities and Investment Commission (ASIC) has found that 80% of retail clients lose money trading binary options. In the 13 months between April 2021 and May 2022 there was a total of \$15.7 million in loss-making accounts for retail clients and only \$1.7 million in profit-making accounts.

ASIC banned the sale and distribution of binary options to retail consumers from May 2021 for 18 months, after which the ban could be extended or made permanent.

Consumers will be better off with a financial system that enables them to invest in products that improve their financial wellbeing, rather than products designed to harm them. This is why CHOICE recently made a submission to ASIC supporting its proposal to protect consumers by extending the ban on the sale and distribution of binary options to retail clients until 1 October 2031.

**YELENA NAM**



## Illegal online casino blocked

**C**ommunications regulator, the ACMA, has ordered Australian internet service providers to block the online casino website thepokies.net.

With payments to the site said to run into tens of millions of dollars, the ACMA says it's one of the most significant websites to be blocked since they acquired the power to block sites in 2019.

Online casino-style games are illegal within Australia. The regulator says it's blocked more than 500 gambling sites to date, with thepokies.net one of the most significant in terms of harm to the community.

"We have received more complaints about thepokies.net this year than any other illegal gambling website, and it is clearly doing a lot of harm to the Australian community," says the ACMA chair Nerida O'Loughlin.

"Complaints have ranged from people who have lost significant amounts of money through to the site refusing to honour deposits and winnings. By blocking access to sites like this we are sending a strong message that the ACMA can and will take action to stop illegal operators from targeting Australians."

JARNI BLAKKARLY



## Australians reveal biggest concerns about health system

**P**rivate health insurance costs, emergency department wait times and access to mental healthcare were the biggest concerns of participants in a survey published in the Australian Healthcare Index.

Other key findings of the survey, which was produced by Healthengine and the Australian Patients Association, include:

- 59% of respondents seeking mental healthcare across Australia have been waiting for three months or longer
  - only a quarter of the respondents say prescription medicines are affordable
  - about half of the respondents would change GPs if their GP stopped bulk billing
  - just over half of respondents who needed category 1 urgent surgery have been waiting for their surgery for longer than the recommended wait time of 30 days.
- Opinions about private health insurance were also sought:
- Positive points were good hospital and extras cover (such as dental check-ups), and some respondents said their policy was good in comparison to other policies.
  - Negative points were poor value for money, affordability and cover for extras.

If you have private health insurance and you want to lock in your annual premium, there's still time. Many health insurers delayed their 1 April premium increase, including four of the five biggest funds. Pay your annual premium before:

- 1 October – Bupa and Medibank
- 1 November – HCF and NIB.

UTA MIHM

## Samsung phone not so waterproof

The waterproof mobile phone appears to be the recurring pipe dream of the telecom industry. But so far it's been a bridge too far. Exhibit A: Samsung recently paid \$14 million in penalties in a case brought by the ACCC for misleading consumers about being able to submerge various Samsung Galaxy phones in pool or sea water.

The Samsung marketing campaign in question ran between March 2016 and October 2018, but during court proceedings the company admitted that the charging port would quite possibly become corroded and stop working if the phone was charged while still wet. That seems to not have been the only thing that might go wrong.

"Samsung Australia's water resistance claims promoted an important selling point for these Galaxy phones," says



ACCC chair Gina Cass-Gottlieb. "We reviewed hundreds of complaints from consumers who reported they experienced issues with their Galaxy phone after it was exposed to water and, in many cases, they reported their Galaxy phone stopped working entirely."

ANDY KOLLMORGEN



## ACCC to keep an eye on fluctuating fuel prices

The ACCC says it's on the lookout for any retailers not passing on the cut in fuel taxes to consumers, as it continues its quarterly monitoring of the fuel market.

In its latest report, the regulator found petrol and diesel prices fell by at least 33 cents per litre (cpl) across major cities after the federal government's cut to the fuel excise.

Chair Gina Cass-Gottlieb says although it was international factors that led to fluctuating prices, the excise cut is being seen at the bowser, and the ACCC will be making sure this relief continues to be felt by all consumers.

"We can see from our petrol market monitoring that the cut to the fuel excise has been passed on to Australian

motorists in the vast majority of locations ... Petrol retailers who fail to maintain the cuts can expect to hear from us."

The ACCC found the halving of the excise on 30 March coincided with cheaper international wholesale prices, to deliver a fall in daily average petrol prices of 42 cpl across the five largest cities in the first few weeks of April.

These reductions were slightly reversed later in the month, however, as the war in Ukraine lifted global prices. Meanwhile, daily average retail diesel prices in the same cities fell by 33 cpl across the first few weeks of April.

LIAM KENNEDY



## More choice for car repairs

New car owners have for a long time grappled with the problem of dealers aiming to lock them into servicing, making it difficult to shop around for a cheaper option from independent repairers.

One tactic manufacturers employed to keep car owners coming back has been to refuse to share the information needed by other repairers to perform necessary work.

But thanks to a new regulation, that's about to end. The Motor Vehicle Service and Repair Information Sharing Scheme came into force

on 1 July, requiring manufacturers to make motor vehicle service and repair information available to purchase by all Australian repairers and registered training organisations at a fair market price.

The scheme will be monitored and enforced by the ACCC, which will have the power to take enforcement action for systemic breaches.

CHOICE has worked on this issue for a number of years, providing submissions in 2016 and 2019 supporting the mandatory information scheme.

In announcing the scheme, Assistant Minister for Competition Andrew Leigh said, "Labor has campaigned for years for Australian drivers to have more freedom about who fixes their vehicle. Whether you own a Toyota Corolla or a Ford Ranger, everyone should be able to choose where they get their car serviced."

"This Scheme ... aims to reduce the cost of owning and maintaining a car, ultimately delivering better value for the many Australians who drive a car each day."

**MARGARET RAFFERTY**

## Why we need a timeframe for insurance in super claims

Disability insurance is an unusual product – you pay for it, hoping you never have to use it. If you suffer an illness or injury that prevents you from returning to work and you make an

insurance claim, you've already endured a traumatic and often financially disastrous event.

It's essential, then, that insurers handle these claims efficiently, allowing people who have become disabled the chance to move on with their lives as smoothly as possible.

However, there are no firm processing timeframes for the companies that provide disability insurance through super. Super Consumers Australia is advocating for timeframes on how long the claims process should take. "We've heard of insurers unreasonably delaying claims,

causing further distress and financial struggle for vulnerable clients," says Super Consumers Australia director Xavier O'Halloran.

A report from mental health organisation Beyond Blue found that "lengthy delays (in insurance claims) can be extremely stressful and, in some cases, may exacerbate a person's mental health condition".

"The industry has shown it can't be trusted on this issue," says O'Halloran. "It's vital we get this issue right and ensure the millions of Australians paying for this insurance can rely on it if something ever goes wrong."

**DANIEL HERBORN**



## MacBook Pro 14-inch

**T**he MacBook Pro 14-inch lifts the bar for compact notebooks in several areas, starting with performance. This is the first MacBook to include Apple's homegrown M1 Pro chip (the follow-up to the highly successful M1 processor). We bought and tested the base MacBook Pro 14-inch model and were surprised to find it the fastest notebook we've had our hands on.

Other standout features include an excellent 14.2-inch high-resolution (3024 x 1964 pixels) screen that's bright and vivid, using the same Liquid Retina XDR technology as Apple's flagship iPad Pro. There's also super-fast



### MACBOOK PRO 14-INCH

**PRICE** \$2999 (base model)

**CONTACT** [apple.com.au](https://apple.com.au)



built-in storage, three high-speed Thunderbolt 4 ports, HDMI and SD Card port, Wi-Fi 6,

Bluetooth 5.0, and the welcome return, after several years, of Apple's MagSafe charging port, plus long battery life and fast charging.

Our base MacBook Pro 14-inch has 16GB (gigabytes) of RAM (memory) and 512GB storage for \$2999, as a starting point. It can be optioned-up at purchase with more memory, storage, and the even more powerful M1 Max chip (as you also can with the MacBook Pro 16-inch, released at the same time). But even in its entry-level configuration, the MacBook Pro 14-inch is a powerful professional-level computer. How far you want to take it is limited only by your budget.

**STEVE DUNCOMBE**

**FIRST  
LOOK**



# ASK THE EXPERTS

Got a niggling question our team can help with?

**Q** I bought tickets for an activity using my Visa credit card and was charged a 5% credit card surcharge. I thought the average fee for Visa was only about 2%? Seems just a way for a business to sneakily take a bit more from customers.

**A** CHOICE money expert Uta Mihm: In 2016 businesses were banned from applying excessive payment surcharges to credit card payments. 'Excessive' is defined as anything more than what it costs the business to process the payment. This ban applies to Eftpos (debit and

prepaid), MasterCard and Visa (credit, debit and prepaid), and American Express "companion cards" (Amex cards issued through an Australian financial service provider, rather than directly through American Express).

How do you know how much it costs the business to process the payment? As a guide, the RBA says for processing debit payments, Eftpos fees are mostly below 0.5% and Visa and MasterCard about 0.5 to 1% of the transaction value. Credit card processing fees are usually higher, costing businesses about 1 to 1.5% of the transaction value for Visa and



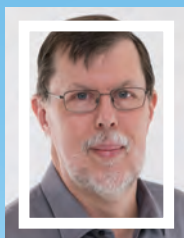
## ASK US

Email your question to [asktheexperts@choice.com.au](mailto:asktheexperts@choice.com.au) or write to Ask the Experts, CHOICE, 57 Carrington Rd, Marrickville, NSW 2204. You can also tap into the 'brains trust' at [www.choice.community](http://www.choice.community).

MasterCard, and 1.5 to 2% for an American Express card. The ACCC does warn, however, that costs may be higher for smaller merchants.

If you believe you've been hit with excessive surcharges when paying with one of these cards, the ACCC advises you first discuss it with the business. If you can't reach a resolution you can complain to the ACCC (visit [accc.gov.au/contact-us](http://accc.gov.au/contact-us)) and they will investigate.

**Q** I invested in solar roof panels some years ago. This source of clean energy also had a financial benefit with the energy company paying the customer a feed-in rebate, or feed-in tariff, for each kilowatt of power. Energy companies are now charging upwards of \$0.25 per kilowatt hour of energy received from the grid, yet will only pay around \$0.05 per kilowatt hour for energy fed back into the grid from your solar panels. It's obvious that when the energy companies are allowed to set the price for what they sell and buy energy at, the customer is going to lose. Can you shed some light on the equity of this system?



**A** CHOICE solar expert Chris Barnes:

Feed-in tariffs (FiTs) vary from state to state and retailer to retailer. State governments usually review and set guidelines for the minimum FiT each year, but not all of them actually require energy retailers to pay a FiT. Broadly speaking, they used to be quite high several years ago, as an incentive for homeowners to install solar panel systems. These days the FiT is loosely linked to wholesale electricity prices. When wholesale prices started to fall, so did the FiT. The current rise in wholesale prices has also led to a rise in FiTs in some states. I am sure that some electricity retailers will try to make as much of a profit as possible by paying low FiTs as long as they can, but some state governments have already increased the minimum FiT, and some retailers might try to retain and win customers by offering improved FiTs.





**We received quite a lot of feedback on our recent battery test (CHOICE Jun 22). In particular, readers asked about the different voltage of single-use batteries compared to rechargeable ones, and whether this was still an issue. Yes, it is still an issue. Single-use batteries have more 'grunt' than rechargeables, which may mean that if a device needs five or six AA batteries, the rechargeable batteries in unison may not have enough voltage to get the device to work.**

#### CHOICE battery tester Scott O'Keefe:

Although the nominal voltage of a fresh alkaline battery as established by manufacturer standards is 1.5V, the actual zero-load



voltage of a new alkaline battery ranges from 1.50 to 1.65V, depending on the purity of the manganese dioxide used and the contents of zinc oxide in the electrolyte.

For rechargeable batteries, a fully charged NiMH rechargeable battery supplies an average 1.25V during discharge. Under a light load (0.5 ampere), the starting voltage of a freshly charged AA NiMH battery in good condition is about 1.4 volts.

So, on paper, the new alkaline battery will almost always start at a higher voltage than the freshly charged NiMH. Under load, the voltage of either type drops. The common comparison is roughly 1.5V for alkaline and 1.2V for NiMH. But it can differ from brand to brand, and battery to battery.

The difference in voltage can definitely be an issue, depending on the product. For example, I have a mini piano keyboard that will not function

with NiMH batteries because the combined voltage of the five batteries is too low. So the number of batteries required to power the device could have an aggregated effect depending on the device's power requirement.

It's not only voltage that remains a concern for some devices. The maximum current that each cell can provide, and the way that current/voltage change over time, is also a consideration. I have a number of clocks that are happy with rechargeables, and others that will only run for a few days.

Our labs are getting ready to do some initial testing on a new type of 1.5V rechargeable battery that uses lithium. We'll be looking at how well it compares to a 1.2V rechargeable battery and to the current batch of NiMH rechargeable batteries, when used in devices that require more than a few AA batteries to operate. We hope to publish the results in the coming months.



## Reader advice

Thanks to our members for these additional tips.

There is one fire safety precaution that readers should be made aware of. Single-use batteries, because of their high internal resistance, can only provide a limited amount of current, about one to two amps. Rechargeable batteries, with a low internal resistance, can supply up to 10 amps of current. Infant fluffy combustible toys should never use rechargeable batteries. The wiring inside the toy is very thin, and in the event of a short circuit the wiring could burst into flames.

H. Wrangell, Qld

A potential major problem with single-use batteries is that they can leak and corrode the terminals of the device they are in, often beyond repair. It really pays to open the battery compartment of long-life devices such as remote controls and check for leaking batteries.

G. Hughes, ACT