THE DISTRICT
Bulletin
Oct–Nov 2017
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CAPITAL REGION FOCUS — environment, business, arts, people, politics, events

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ILLUSTRATION: SUE VAN HOMRIGH

With more frequent extreme weather events – hurricanes, flood, fire – the connection between climate change and rising ocean temperatures and storm ferocity and, on land, drying landscapes and fire, can no longer escape attention. But while nations have slowly agreed to reduce carbon dioxide (C02) emissions, little attention has been paid to a potent and growing emissions threat from the synthetic refrigerants in our temperature control systems – including every reverse cycle system, refrigerator and commercial cooler. ***Adam Taylor*** *explains.*

HFCs, A CHEMICAL family referred to as 'F gases' due to the presence of fluorine, are synthetic refrigerants used by the temperature control industry in heating, air conditioning and refrigeration. These gases were rapidly deployed in the late '80s as substitutes for ozone-depleting HCFCs following the ratification of the Montreal Protocol.

They are often branded as the safe, environmentally friendly option. However, contrary to the industry spin, they are in fact potent greenhouse gases and a rapidly growing contributor to global climate change.

Although they lack the ozone killing properties of their chemical cousins, the global warming potential (GWP) of HFCs is 1,000 to 9,000 times greater than CO_2. The US Environmental Protection Agency estimates that, if the growth in HFC usage is left unchecked, it could account for as much as half a degree of warming by the end of the century, a devastating blow to the global target of restricting warming to 2°C over that period.

Tim Edwards, founder of the Australian Refrigeration Association (ARA) and former General Manager of Good Environmental Choice Australia, says that despite the efforts of ARA and several other industry groups to ring the alarm, the role of refrigerants in climate change has been largely ignored by the temperature control sector. He says some examples of industry leadership are notable exceptions, but these represent outliers of an industry which is largely resisting change.

Project Drawdown, an international coalition of scientists, policy makers and business leaders assembled to assess and rank prospective climate solutions, ranks refrigerant management number 1 on their top 100 list, ahead of onshore wind energy (#2), educating girls (#6) and solar farms (#8).

>> p9

Confusion erupts over QPRC plans for new admin building

Maria Taylor reports from new council's first meeting and aftermath

AT THE SEPTEMBER council meeting, Mayor Tim Overall and election team A, with the help of two unquestioning Palerang-based councillors, Schweikert and Hicks, and two Queanbeyan-based councillors, Brown and Noveska, ticked and flicked approval for a new $57 million council headquarters building and environs.

Almost immediately thereafter, the vision appeared to crack.

As General Manager Peter Tegart explained, the proposed six-storey building with underground parking in what is now The Q carpark could only proceed with a major tenant helping to pay for it (along with more than $35 million in external borrowings).

It has been common speculation that the NSW police were the proposed tenants for two of the building's floors and parking. It was later confirmed they were approached by council. The QPRC administration believed it had a promised deal.

Then the proposed tenant spoke up, implying to local media that the police did not want to move, not there at least.

Police Commissioner Michael Fuller was reported as saying that Queanbeyan Police had no desire to leave their current premises. "My priority is to have [the new station] next to the courthouse because that's what police are telling me." (*NSW Police cast doubts over new council building*, Elliot Williams, *Queanbeyan Age*, 28 September.)

>> p4

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THE DISTRICT Bulletin COUNTRY LIVING in Queanbeyan and Palerang

Coming up ...
see Editorial p8

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CSIRO independent analysis:

no support for kangaroo research assumptions

by Maria Taylor

IN MAY of this year, we were confronted by the eighth year (longer, if one counts killings going back to Googong in 2004) of ACT government contract killings of Eastern Grey kangaroo families on urban nature reserves – based on some mathematical formula for one kangaroo per hectare, or less, 'to save biodiversity' according to the official line. (*Mothers Day Killings Start Again, District Bulletin* June 2017, p11; *Another unnecessary roo slaughter, Canberra Times*, May 25 2017, p19).

This lethal program is on top of tens of thousands of kangaroos killed per decade with government license on nearby grazing leases and ditto in surrounding NSW. In NSW too, a government-sanctioned multi-million dollar commercial petfood and leather industry kills hundreds of thousands more annually. (It is hardly surprising that kangaroos take sanctuary from bullets in more populated areas.)

Whether it's on grazing properties or Canberra's grassy reserves, the kangaroos' alleged sin is, simply put, that they eat grass. (The Eastern Grey is one of Australia's remaining indigenous grazers that survived bounties and other colonial slaughters – and one of the few marsupials able to adjust to living with the humans now on their former habitat.)

The ACT government since 2009 has not responded to requests for evidence showing the impacts or benefit of their kangaroo management program – that costs up to half a million dollars in taxpayer money every year.

Freedom of Information request finally yields some answers

Following this year's urban 'cull' I filed a Freedom of Information request asking for the outcomes of kangaroo culling on flora and fauna in the Canberra Nature Park in recent years. I asked also for evidence of sustainable kangaroo populations and the basis for the one kangaroo/hectare goal.

I received an interesting batch of papers. They did not prove the ACT needs one kangaroo per hectare or less, or that this lethal management is sustainable.

They did show that the territory's research and monitoring, such as it has been, can't support the assumptions that preface their research and that also lead the public narrative – namely, that ACT kangaroo populations need to be "actively managed" to alleviate their grazing pressure.

The ACT Environment and Sustainable Development Directorate research wants to measure this grazing pressure by a simple correlation of kangaroo numbers and grass height, colour, density and bulk, what they call "green herbage mass".

No relationship between commonly-found kangaroo numbers per hectare and ground cover condition in native grass and woodlands.

A 2013 interim directorate report of how they research this relationship is prefaced with the assumption that pops up on each report: paraphrased it reads 'everyone knows kangaroos damage the environment and we have to cut the density'.

Unfortunately there is no comparative baseline data on ecological communities that are allegedly damaged – either before the kangaroo management plan of 2010 or before a revised version was accepted in 2017.

CSIRO commissioned report no backing for ACT assumptions

Unfortunately too for the ACT position, a commissioned 2014 CSIRO report takes a fresh look from the outside – a perspective rebuffed during three ACT Administrative Tribunal legal appeals since 2010. This report covers the government's data collection from 2009, 2012 and 2013. (Author Lyndsey Vivian is a consulting ecologist and botanist, and author Robert Godfree is a field ecologist specialising in native plant ecosystems.)

The CSIRO analysis does not support the assumptions adopted by the parks bureaucracy in its kangaroo research and methods.

Instead it starts by asking an assumption-free scientific question: whether relationships exist between kangaroo density and vegetation condition in the Canberra grasslands and grassy woodlands.

ACT research: measuring grass height and bulk as main data, plant diversity, animal interactions, or impact of the weather, not included.

What the CSIRO report found

There are three key findings that contradict the government's narrative. The CSIRO report "could not identify any upper limit of kangaroo density beyond which vegetation richness, diversity and overall condition declines". In other words, the authors checked ACT-studied sites with densities up to three kangaroos per hectare, and could not say that vegetation indicators had declined on any front up to that number of animals.

In regard to the one kangaroo or less per hectare goal, Godfree and his colleague also found no evidence. They could not "identify an optimal kangaroo density that maximises richness, diversity and condition".

True blue Aussie: *victim of petfood trade, long-standing prejudice and unproven management claims.*

Thirdly, this study supported many criticisms about the lack of variables studied by the ACT, particularly the weather. "At the site level, changes in vegetation structure and composition varied more between years, which may be associated with different prevailing climatic conditions, than with kangaroo densities."

It also notes other variables that can affect a site's vegetation structure such as grazing history; previous fire and drought; soil conditions and nutrients, etc. "The low correlation between kangaroo densities and vegetation condition metrics is likely due to the variable nature of grassy ecosystem condition relative to a number current and historical site factors not related to kangaroo densities," says this report.

So we have a CSIRO finding that ACT data up to 2013 yield no evidence of a measurable relationship between kangaroo grazing (up to averaged three per hectare) and the condition of on-ground vegetation. (One should add that these sites don't have the additional pressure of simultaneous sheep, cattle or horses.)

Undaunted, an ACT January 2015 project design report (harking back to research started in 2012) again claims that "the ecology behind the policy to control kangaroo grazing pressure is well understood". It does admit that they don't know a numerical relationship between kangaroo numbers and "green herbage mass".

Photo caption admits something different

Looking for evidence of a negative relationship, the ACT research I saw never looked at the positive ecological relationship between kangaroos and grassland and woodland animals they evolved with.

So it was interesting to read as a caption for a report photo: "Eastern Grey kangaroos are magnificent animals, well-adapted to temperate south-eastern Australia, where their populations play a central role in the ecology of grassy ecosystems by altering the habitat of small plants and animals." Perhaps they meant 'by maintaining the habitat'. ■

My thanks for assistance with the FOI documents to ex CSIRO plant biologist Bill Taylor and Frankie Seymour former public sector social scientist analysing government environmental reports and policy.

Sources: Lyndsey Vivian and Robert Godfree: *Relationship between vegetation condition and kangaroo density in lowland grassy ecosystems of the northern Australian Capital Territory.* 2014 CSIRO report to the ACT Environment and Sustainable Development Directorate (EDP).

Rob Armstrong: *Interim Analysis of relationship between vegetation condition and kangaroo density in grassy ecosystems of the northern ACT, Analysis of data collected in Spring–Summer 2009–2012.* 2013 Environment and Sustainable Development Directorate (ACT Government)

ACT staff unnamed: *Project Design for research on Kangaroo Impacts in Canberra Nature Park.* 2015 EPD, ACT Government.

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:: Council Watch ::

CONFUSION OVER QPRC PLANS *from p1*

Police station hostage to electoral politics?

Overhauling the current police headquarters on the corner of Monaro and Lowe St next to the courthouse has been a political talking point for more than two years.

The same news report had Deputy Premier and member for Monaro John Barilaro (who is viewed as the conduit for state money for the project) saying no decision had been finalised.

"What is absolutely clear is that we are going to have either a brand new purpose-built police station in a new location, or a brand new purpose-built police station on the current site," he was reported as saying.

Meanwhile QPRC councillors were informed the deadline for finalising the new police quarters is before the NSW state election in March 2019. Calling the whole affair a political football, Labor candidate for Monaro Bryce Wilson said the NSW government should get on with it and build what the police want, where they want it.

QPRC in talks with senior police management

QPRC General Manager Peter Tegart, who drove the plan during the administration phase, told the *Bulletin* he is not worried by all this talk in the media. He said the police are just doing due diligence and that he was told by a senior police official "don't go away".

Three members of the council were more restrained on this vote. Pete Harrison, Peter Marshall and Kenrick Winchester all expressed reservations about a rushed vote saying that while in principle they saw the need for a new council headquarters and the plan looked nice, there were still unanswered questions.

Particularly for the Palerang councillors, five days was too short to examine a massive proposal and its cost structure (including the idea of borrowing some $11 million from the water and sewer reserve). But they were overruled. (In context, the new Palerang council chambers cost just $2.6 million to construct.)

The other two ex-Palerang councillors – Liberal Party nominee Mark Schweikert and Trevor Hicks, now Deputy Mayor – quickly jumped into line with Mayor Tim Overall and his team (Peter Bray, Trudy Taylor and Michele Biscotti). Hicks called for the vote saying "It's a lot of money well-spent for the future of Queanbeyan."

Focus on downtown Queanbeyan redevelopment

This first council meeting was indeed focused on Queanbeyan development, starting with the new headquarters precinct with privately-developed apartments across from the library, better linked to the central CBD and river with walkways and green space.

The interim administration's idea has been that new building development will bring new people, jobs and business into the centre of town.

Councillors also agreed to call for expressions of interest for a multiplex cinema on council-owned land – a repeat favourite idea of Queanbeyan council, and touched on a new sports complex at Jerrabomberra.

Peter Bray, who appears to be the Overall team's (frequently annoyed) front man, told the ex-Palerang councillors, "It's all part of the [long-standing] masterplan vision for downtown Queanbeyan. A massive document. You won't get your head around it in a hurry (anyway)." [So just say yes, appeared to be the message.]

For Palerang?

Proposed progress on Team A's infrastructure election sweeteners headed the council meeting: Upgrading Resch's Creek low-level crossing to the Rossi area (which may be in funding competition with fixing the Foxlow bridge); straightening out Burra Road S-bends; finish sealing Summerhill Road in Bywong, (all three projects underway with the previous Palerang council). Also a bus shelter for Googong.

How do we pay for everything?

A decision on council finances, the so-called resourcing strategy that balances services and rates, (with a 1% rate increase in years 4–10 of the new council, mentioned), was deferred for further workshopping.

This harks back to critical audits pre-amalgamation, finding that neither Queanbeyan nor Palerang alone, let alone together with all their road and maintenance responsibilities, were 'fit for the future' without either services dropping or rates increasing or elements of both. ■

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Fire risk report
gives pause to Yass council on rezone for urban development on ACT border

AS THE 2017 fire season is almost upon us, a June fire risk report regarding a proposed rezone from environmental management and farmland to a suburban development at Ginninderra Falls on the ACT/NSW border, offers timely lessons for all councils and residents at a time of heightened fire intensity and risk.

"Intense bushfires, ember storms and turbulent winds are real threats," says Dr Jason Sharples of the UNSW, Canberra, specialist in extreme fire behaviour and author of a report commissioned by the community Ginninderra Falls Association.

"The current risk assessment standard does not account for recent scientific insights into extreme fire development," he said. "Canberra people remember the fires of 2003, when extreme fire came out of the hills and into the suburbs. The current standard assumes that radiant heat is the main cause of houses burning down.

"Findings from the Canberra bushfires show that ember attack is a much more significant risk."

Current methods do not take into account the effects of very steep slopes that line up with the prevailing wind direction, such as those on the north western edge of the proposed 'Ginninderry' development.

The housing planned by a prominent ACT construction company overlooks the Murrumbidgee River near Ginninderra Falls and abuts Canberra suburbs. The NSW land is currently zoned E3 (Environmental Management) and Ru1 (Primary Production) and would suddenly become R1, general residential, under this proposal. Yass council has yet to determine if it wants to proceed with rezoning or not.

Robyn Coghlan of the Ginninderra Falls Association and former President of the Belconnen Community Council is hopeful Yass Valley Council is heeding the bushfire report. Additionally, "Rezoning this environmental land to urban could not only potentially put people in harm's way, it could also increase pressure to burn the surrounding forest for the protection of property, putting the fragile ecosystem and threatened species at risk" she said. ■

STOCK IMAGE, INSET CANBERRA FIRE 2003, ABC.NET.AU

Palerang fires in court

CRIMINAL CHARGES and a class action suit have ensued from the February 17 Carwoola fire that raged through 3,500 hectares of rural residential and rural land around Widgiewa Road. It destroyed eight homes and many animals in hot, dry and windy conditions.

Two tradesmen working for a plumbing contractor have been charged with allegedly using a power tool unlawfully on a total fire ban day. The charges relate to causing or setting fire to another person's property and failing to comply with a total fire ban. The men have pleaded not guilty and the case returns to Queanbeyan Local Court in October.

Additionally a Victorian law firm has launched a class action suit on behalf of those affected, which is now in NSW Supreme Court. Maddens Lawyers had previously successfully prosecuted on behalf of victims of several major Victorian bushfires.

The firm has also filed suit on behalf of property owners affected by the 3,384 hectare Currandooly fire north of Lake George in January. The lead plaintiffs are two Mt Fairy residents.

The class action in that case was filed against Infigen Energy, claiming that the company was liable after a bird hit high voltage wires that transferred electricity from Woodlawn wind farm to a substation at the Capital Wind Farm, starting the fire. Infigen has denied liability. The poles and wires that transmit between the windfarms are built to standard specifications for the electricity industry. The case has not gone to court yet. ■

2017–18 Bush fire danger period starting

What you shouldn't be doing on high fire danger days

THE STATUTORY BUSH Fire Danger Period commenced on Sunday, 1 October 2017. The NSW Rural Fire Service (NSW RFS) is reminding residents that fire permits are required during the this period. Residents must also give the NSW RFS and their neighbours 24-hours' notice prior to burning.

People wishing to light a fire in the open will require a permit, which is free and can be obtained from your local fire station or Fire Control Centre.

"When conditions are particularly bad, such as on days of Severe, Extreme or Catastrophic Fire Danger, the NSW RFS may declare a Total Fire Ban.

On a day of Total Fire Ban the lighting of fires is prohibited. This includes cooking fires using incinerators and barbecues which burn solid fuel, such as wood or charcoal.

It also prohibits the outdoor use of certain power tools like grinders.

Fires can also be started by motor vehicles, including trail bikes, in dry grass. ■

Further information is published at **www.rfs.nsw.gov.au**

Local residents can call their **Fire Control Centre on (02) 6128 0600**

or the **Bushfire Information Line on 1800 NSW RFS (1800 679 737)**

:: Consumer news ::

Households struggling with increased energy costs, look to swap

by Graham Franklin-Browne

AS GOVERNMENT staggers toward a solution for Australia's energy woes, online energy brokers are reporting a large increase in the number of calls from business and residential consumers desperate to secure a better deal from energy retailers.

Corporate Affairs manager for online comparison service, iSelect, Laura Crowden, recently spoke to *The Bulletin* and revealed that over the 2017 June to August billing period, iSelect had received a 26 percent increase in the number of inquiries compared with the same period last year.

This year iSelect assisted over 16,000 customers to find a cheaper energy plan. While most online inquirers were introduced to a new retailer, about 20% were helped to find better deal from their existing supplier.

There were also many consumers already on better deals, but had not been told by their provider that their plan would automatically revert to a more expensive, standard version on expiry.

"This is known in our industry as the lazy tax," said Laura. "It allows retailers to profit from not keeping customers better informed. Householders and businesses need to be much more proactive these days and keep a closer watch on their energy providers."

iSelect research shows that more NSW households are worried about their energy bill this winter than last year, partly due to the latest price hikes which will see customers in NSW paying up to 17 percent more.

One in five households going into debt or hardship program

"With homeowners shivering through another cold winter, it's concerning that over two million NSW households may be using their heating less due to concerns about energy costs."

"And it's not just heating," Laura said, "our study suggests that many NSW households are also cutting back on essentials like food and clothing to afford their energy bills."

Despite making cut-backs, almost one in five NSW households reported going into debt, or being placed on a hardship >> p7

Sponsored by infigen

Let no waste be wasted

a visit to the Veolia waste treatment plant at Woodlawn

by Graham Franklin-Browne

EVER WONDERED how geographically vast Sydney really is, or how far its presence extends? For most of us around here the state capital still seems a respectable distance away – and we generally like to keep it that way.

It's a three-hour drive, a four-hour train trip, or (if you are in a hurry), a half-hour flight, a stale brioche, a slurp of burning coffee, and you arrive.

Regardless of your mode of transport, you always get to Sydney with some sense of arrival. Which is why, when I visited the Veolia waste plant near Tarago last month, I was rather gobsmacked to realise the full extent and influence of Australia's largest city on our local region.

The event was an official opening, and as I groggily sat next to the gas heater inside the wind-blasted media tent I really did try to listen to the speeches, but I eventually lost the plot, and began to reflect on the spongy boundaries between city and country.

Because of those infamous and gravity-defying land (and therefore landfill) prices in Sydney we are in fact very close – close enough for the city to bestow upon us a significant proportion of their 'putrescible' waste.

The facility is very impressive. The plant, or to give its proper name, the Veolia Mechanical and Biological Treatment facility (MBT aka 'The Wombat'), is 250 kilometres south of Sydney at Woodlawn eco precinct, near Tarago. Its noble purpose is to maximise recovery of, and divert from landfill, as much organic content as possible from Sydney's household waste.

Waste comes from the city by rail, and is finally transferred to trucks for delivery to Woodlawn. The material is sorted in a six-storey shed and most of the organic content converted to compost in a number of rotating drums. The drums (seen above) are an astonishing four metres in diameter and over 50 metres long.

Woodlawn bioreactor

The final composted product is stored in giant sheds prior to collection and distribution. Any organic waste which is not recovered in the composting process goes to a landfill bioreactor for energy recovery.

Like everything else in this facility the bioreactor is gigantic. Located deep within the old open-cut mine at Woodlawn it is approximately 800 metres wide and 200 metres deep. At the start of the project a few years ago Veolia's engineers estimated that it would take over 40 years to fill the mine void.

Biogas (mostly methane) is recovered from the bioreactor and used to power electrical generators. Although methane itself is regarded as one of the worst greenhouse gases, it is paradoxically a relatively clean burning fuel, and Veolia hopes to produce enough 'green' energy to power over 30,000 homes.

While the entire facility is technically remarkable, and massive, the current production process is energy intensive, and at this stage the plant does not use its own electricity. Infigen's wind turbines can be seen spinning majestically in the background, but they are not connected to the MBT. The facility uses coal-fired electricity which it gets from the grid.

However Veolia does have plans to develop a solar farm adjacent to the Woodlawn facility to supply the bulk of its electricity, and provide a local sustainable energy solution into the future.

There is also a lot of waste heat from the process which is cleverly harvested to run an award-winning fish farm. Tropical barramundi are bred for restaurant consumption in local towns around our region and in Canberra.

So, what, apart from Sydney's garbage and some Asian sea bass, does the local community get from the MBT facility at Woodlawn?

Local jobs

Something like 370 additional jobs were created during construction, and the company continues to engage with the community through the Veolia Mulwaree Trust, providing funding for charitable purposes and community projects in the six local government areas neighbouring the facility and Goulburn Mulwaree Council.

Since 2005 the trust has distributed approximately $7.5 million to local community initiatives across these local government areas. In a few decades Tarago will get its mine filled in and rehabilitated.

So it seems the old Yorkshire proverb still rings true, 'Where there's muck, there's brass'. ■

Sanjeev Gupta – 'can-do' steel magnate

brushes away coal cloud in Australia

IN SPITE OF floor-crossing Tony and his recent tweet-bleat that Malcolm is flirting 'unconscionably' with the renewables sector, yet another industrial heavyweight has emerged from beneath the coal cloud to help Australia transition to a more rational energy future.

Not long after Elon Musk's pledge to help out with South Australia's recent energy crisis, British steel baron, Sanjeev Gupta has teamed up with economist, climate science convert and now renewables businessman Ross Garnaut to dispell the myth that Australian industry can only survive on coal.

Earlier this year Gupta bought the Arium steel works in Whyalla, South Australia, and saved it from foreclosure and its workers from the dole queue.

Following acquisition of the works, and in order to reduce the plant's grid power consumption he bought a 50.1% share in Zen Energy, the company co-founded by Garnaut.

They plan to develop a combination of solar, pumped hydro, and battery storage solutions to power the Arium steel mills and deliver excess power to the grid.

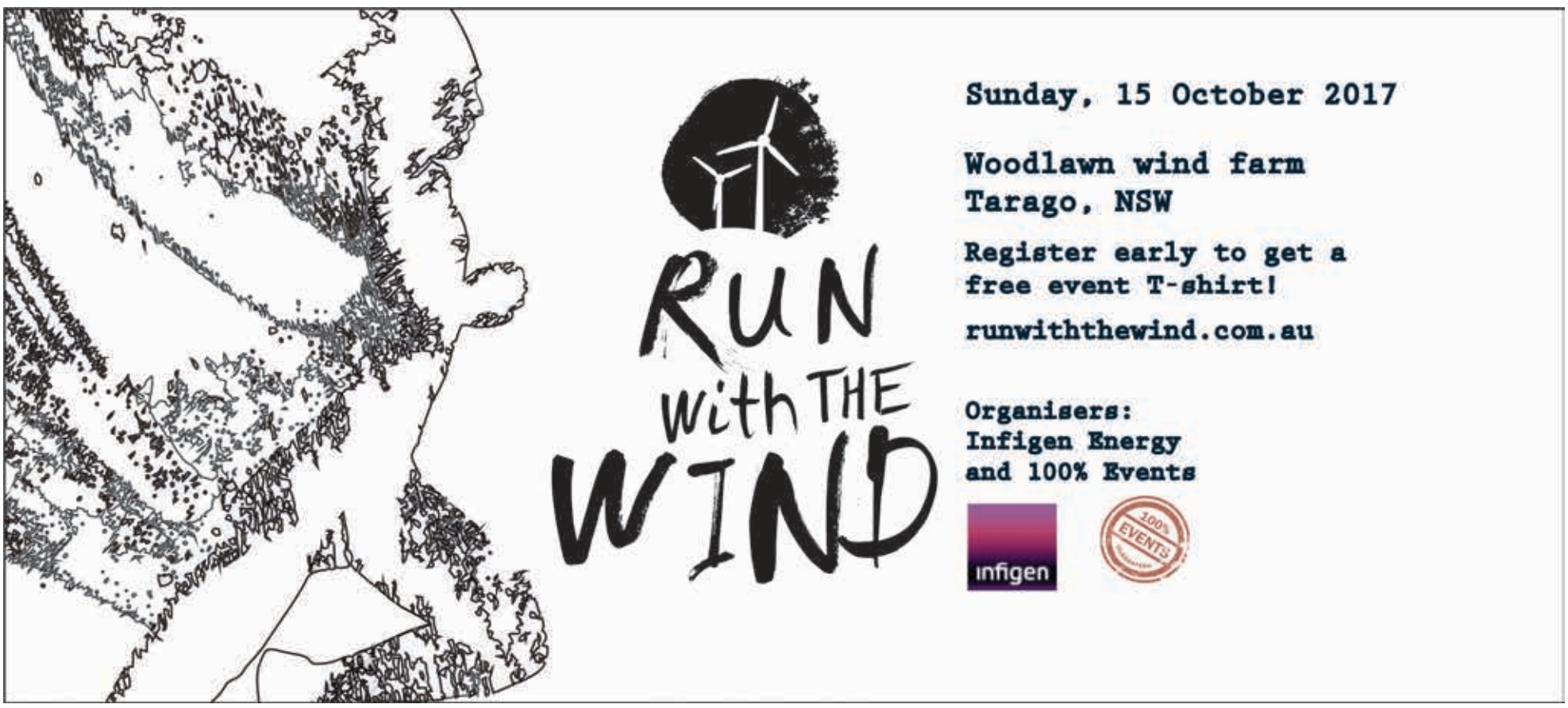
Energy will still be taken from the grid, including a component of fossil-fuel power, however the company expects to put more renewable electricity back into the grid than it takes coal-fired electricity from it.

Gupta and Garnaut are amongst the many business leaders now calling on the federal government to agree on a market mechanism, such as (horrors) a Clean Energy Target, to provide industry with energy certainty beyond 2020.

"You have a country which is blessed with all the natural resources to allow you to be perhaps the lowest cost energy producer in the world," said Gupta.

"And yet you are the highest cost producer of energy in the world. So to put it bluntly, it's broken and it has to be fixed." ■

Footnote: to learn more about who the real Energy "Unconscionables" are, read Katharine Murphy's entertaining article in *The Guardian*
www.theguardian.com/australia-news/2017/sep/20/a-clean-energy-target-is-not-unconscionable-tony-abbott-wrecking-climate-policy-is?CMP=share_btn_link



Rising electricity prices:
what's driving them up?
And, surprise, what is the cheapest input now?

We at the Bulletin *are big fans of our public broadcaster's business editor,* ***Ian Verrender****, who invariably analyses public policy and government economic decisions in a way that is comprehensive and easy to come to grips with.*

In these excerpts from a recent analysis, he sets straight current facts and 'alt facts' about the rising cost of energy that is bombarding households and businesses.

Far from driving up prices renewable energy is now the cheapest form of generation and that comes from the business community.

Read the whole article at **http://www.abc.net.au/news/2017-09-25/the-truth-about-soaring-power-prices/8979860**

"FOR THE PAST decade or more, we've been bombarded with the message from a vocal but powerful minority within Parliament and the broader community that the switch to renewable energy has made Australia uncompetitive, crippled our industry and driven power prices higher.

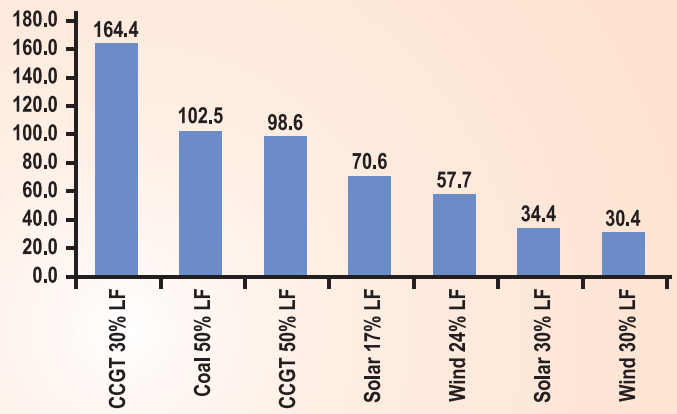
"The real issue is that, fundamentally, they don't believe climate change is real or that humans have adversely affected the planet.

"Having spent so long denying science and rejecting the overwhelming body of evidence, they're now being forced to ignore economics; that renewables have become a cheaper longer term power source.

"US investment bank Goldman Sachs — hardly a standard bearer for radical ideology — now argues that, rather than pushing power costs higher, renewable energy is the cheapest form of power generation.

Wind and solar are currently the cheapest way of producing electricity when investment costs are taken into account

LCOE – wind and solar vs other technologies (US$/MWh)



Source: Goldman Sachs Global Investment Research

Poles and wires charges biggest increase

Australian Competition and Consumer Commission chair Rod Sims at the National Press Club in September said: "Forty-one percent of the increase in electricity prices over the last 10 years has been in network costs and we keep forgetting that. Those poles and wires that run down your street are the main reason you are paying too much for your electricity."

"According to Mr Sims, extra retail charges account for 24% of the higher prices while higher

>> pg8

HOUSEHOLDS STRUGGLING

from p5

program during the past 12 months as a result of rising energy bills.

Laura pointed out that while winter energy costs are clearly hurting NSW households, just 16 percent of homes surveyed had switched providers or plan in the last year to get a better deal.

"Thousands of NSW households could be paying more than they need to for energy by not taking advantage of some of the generous introductory offers or discounts energy companies are offering to new customers."

Laura offered 5 tips for finding a better deal.

1 Save money with the right plan – reducing your consumption won't necessarily reduce your bill significantly. The best way to save money is to make sure you are on the best value plan to begin with.

2 Use a flexible payment option – pay your bills weekly, fortnightly or monthly, or sign up for bill smoothing which will divide your annual usage into even monthly installments, avoiding bill shock.

3 Be wary of pay on time discounts – paying on time could save you up 30% but if you often pay your bills late, you could end up paying a lot more than you expected.

4 Look out for special offers – increased competition means some retailers are offering generous introductory offers or rebates to entice new customers such as credit towards your account.

5 Shop around – use increased energy competition to your advantage by comparing current offers. Call an energy comparison service like iSelect and make sure you have a copy of your latest bill handy.

How to switch your plan or retailer

Readers experiencing difficulty with energy bills, and needing advice on how to switch, can consult a number of online energy advisors for help and to compare retailers and plans.

Some of these sites will also offer advice and assistance over the phone. ■

Here are few to get started:

www.home.iSelect

www.energywatch.com.au/energy/comparison – part of iSelect group

www.businessenergymarketplace.com/BEM; www.energymadeeasy.gov.au

www.aer.gov.au/consumers/switching-retailers/comparing-offers

www.choice.com.au/shopping/...for.../shopping-around-for-a-new-energy-deal

RISING PRICES *from p7*

generation costs as a result of a failure to invest make up 19% of the price hikes.

"Green energy initiatives contribute just 16% to the recent price hikes."

Gas prices the culprit too

Gas is the expensive bit at the end [of the electricity input chain] that determines how much a producer will charge everyone.

"Gas prices haven't just increased. They have quadrupled. And the tragedy is that Australia, with one of the greatest reserves of gas on the planet, now charges its households and businesses far more to use that energy than the countries to which we export.

The truth about subsidies

"When it comes to cost, coal lobbyists usually refer to the subsidies doled out to the renewable sector to argue the industry wouldn't exist if it had to stand on its own.

"That's a valid point. But it overlooks two things; the vast billions handed out to the coal industry and the increasing competitiveness of renewables.

Every coal-fired generator in Australia was built, not just partially subsidised, entirely with taxpayer funds.

"When they were privatised, many were given state-owned coal mines with contract prices way below market, effectively a further subsidy. ■

LETTERS...

Time for Queanbeyan-Palerang to lead on climate change

AS THE NATIONAL debate rages on with our Federal Government's ongoing failure to set a binding renewables target, local governments across the country have been getting on with the job of tackling climate change – and Queanbeyan-Palerang is no exception.

But we may be missing a valuable opportunity to promote and accelerate the great work happening locally to transition to a cleaner, more sustainable future.

The Climate Council recently launched a new program to support local governments to reduce emissions and transition to clean energy, the Cities Power Partnership.

Our neighbours across the border in the ACT were one of the first to sign up to the program as has Yass Valley which provides an invaluable opportunity for networking and knowledge sharing with like-minded councils finding innovative climate change solutions.

So, where is Queanbeyan-Palerang? The council has been formally invited to take part in the Cities Power Partnership program, but is yet to commit.

As a farmer in the district I know that there is a lot being done at a local level to encourage the transition to renewable energy. The council recently approved the former Palerang Council's solar panel installation program, which is delivering annual savings of over $30,000 in electricity costs. As electricity costs skyrocket, renewable energy is the sensible way forward for local residents, financially as well as environmentally.

Local governments will play a leading role in Australia's move to a renewable future. A commitment to the Cities Power Partnership program would signal our council's willingness to be leaders around the crucial issue of climate change.

— Rob Purves, Carwoola

Education: the proof is in the pudding, remember TAFE

MINISTER BARILARO [Member for Monaro] enthuses on the subject of education, asserting "that [as] our children are our future...it is important we support them with a quality education" (Your MP, QA, 01 August, p.4).

Few would argue with this very reasonable imperative. However future funding is by no means clear and a sum of $46m spread over NSW, will do little to meet educational needs of hundreds of thousands of pupils.

This sum looks even more irrelevant in the face of Federal Liberal/National Government policies to cut funding to NSW public schools, the system standing to forfeit up to $400m, I believe.

When Gonski was initially proposed, former education minister, Adrian Piccoli, courageously resisted his federal compatriot's refusal to appropriately fund NSW students.

Under Malcolm Turnbull's Gonski Mark II, it seems the battle is on again, with pupils the ham in the sandwich. Despite Barilaro's heroic declarations, it is still questionable if he has the fortitude of his predecessor to demand adequate funding on behalf of NSW students.

There is internal conflict between the now-Deputy Premier's advocacy for primary education and his track record while responsible for TAFE.

During his tenure 126,000 fewer students were enrolled in TAFE. The highly regarded institution was denuded of 5,000 employees, fees surged, campuses were sold-off and, as is usual, the 'victim' was blamed for "failure to adapt to changing market conditions", ie as determined by demands of industry. His credibility in being an advocate for education is on the line.

— Albert M. White, Queanbeyan

Where are you Len?

I LAST SAW my once-apprentice then tradesman Len (Leonard Norman) Smart in 1988. He may now be at Bywong or Mollymook, according to his licence. Really interested to have a chat. Can anyone assist?

— Anthony Clancy, 0756 552 225 or goldmort@onthenet.com.au

Pumped-hydro offers end to coal-burning electricity generation in NSW

ACCORDING TO the Australian Nature Conservation Council citing a new university study, there are over 8,600 pumped-hydro suitable sites in NSW confirming that new coal-burning power stations will not needed to meet our energy needs.

"An Australian National University study shows that NSW can source all our power from clean sources, at any time of day, 200 times over," conservation council CEO Kate Smolski said.

"This spells the end of burning coal for power. All that remains is the political will to shift us to this clean, renewable energy."

ANU identified 29,000 GWh of storage capacity in NSW and the ACT, while only 450 GWh is needed to replace all coal and gas-fired power stations in Australia.

"Why would we continue burning coal, polluting communities and ripping up farms [and environmental reserves] for open-cut coal mines, when we there are thousands of sites in NSW that can provide clean energy on-demand?" she said.

"The ANU research estimates the cost of renewable energy backed up by pumped-hydro at 7.5c/kWh, which is lower than current wholesale prices in NSW, without even taking into account the benefits of pollution-reduction.

Instant base-load

"Hydroelectric turbines can switch from off to full power in one minute, while coal-burning generators take all day to get up to speed.

"In today's modern grid, flexible and dispatchable power is what we need, and 8,600 sites have now been identified in NSW to provide that power with zero pollution.

"Spending $900 million on propping up Liddell coal-burning power station for five more years would be a complete waste. ■

ANU atlas of pumped hydro energy storage:
http://re100.eng.anu.edu.au/research/phes/

Editorial

Enjoy Spring and Summer!

Looking ahead...

THIS OCTOBER–November print issue of the *Bulletin* will be our last for the year. I will be taking some medical leave and other time out for a book project. The print *Bulletin* in refreshed form should return in the first quarter of the new year, all going well.

Good news: our website **www.districtbulletin.com.au** continues and will be boosted. Advertising and editorial contributions, letters, articles, book reviews and also events are welcomed. Please contact me and us through the usual mailbox **media@districtbulletin.com.au**. Events: please send finished poster or article – we cannot write it up for you.

The current issue foreshadows a little of where we want to take the *Bulletin*, to connect with a wider regional audience. The focus is on sustainable living in our shared environment, highlighting issues under-reported elsewhere. We won't stop celebrating individuals and organisations that enhance our communities – whether through business, culture, science or other ways to contribute.

We'll continue political reporting at local and state levels – our strength is independent, community-minded and progressive analysis. But community happenings at the very local level are now being covered elsewhere in neighbourhood and village publications and through digital media.

Note – you can watch council meetings in real time or downloaded via a webcast facility on the QPRC website. During the council elections people said, 'I want to make up my own mind about these councillors representing me'. There is no better way than watching them in action in monthly meetings.

Where we are headed

As I look out at the world that sustains us all, the worsening assault on our natural environment and biodiversity calls for response as citizens and as consumers and reporters. Our cover story on refrigerants features a courageous citizen bucking corporate pushback and political disinterest to speak up for the greater good.

It's not just Donald Trump rolling back environmental safeguards protecting our common heritage – from the atmosphere to public lands and water – it's happening now, right here in our state and country.

So we see the federal government proposing to unravel Australia's world-beating marine sanctuaries; the NSW government reversing state native vegetation and wildlife protections; east coast governments threatening our remaining wildlife and water resources with new mining ventures and corporate agricultural developments; our local council administration insisting on an ill-conceived road through suburbs and bushland.

These assaults are always made in our name: for jobs and growing human populations, just like the much-disputed Adani mega coal mine that threatens the Great Barrier Reef and our atmosphere.

The backward-looking federal and Qld governments appear to have neglected the most basic due diligence on Adani; instead proposing to 'lend' our tax dollars to what increasingly looks like an international Ponzi scheme conglomerate (raise money here to pay off debt there before it falls over) and siphon millions to tax havens in the Caribbean.

Instead we can work with those who show there is another way and are already making a difference. Looking at society's infrastructure, Graham Franklin-Browne reports in this issue on Veolia in our back yard, mining magnate Sanjeev Gupta's amazing turnaround of the Whyalla steelworks, and other signposts to where we can head for a more secure future (p6,7).

Good or bad, these things affect all of us and our children.

On the social front, we at the *Bulletin* join every major publication in Australia, even the Murdoch press it appears, in urging a 'yes' vote for equality in this weird voluntary postal survey on same sex marriage.

And a little plug: if you like what we do, please show support via the donation button on the website, to keep the website chugging along.

Snakes alive! I had to laugh when reading some good advice on living with snakes in our rural environs – a topic of fairly massive interest as more people move out from the cities.

It seems we did everything wrong last year when a brown snake took up residence too close for comfort around the house and the dog's territory. We provided food, water and shelter.

There were tasty frogs living in watering cans next to a patio water barrel; we had left a fallen wattle on the ground near the house garden thinking it was nice for the little birds. Instant shelter and cover. We had left a water bowl out nearby for the lizards. Then one day the snake was sunning on the pavers and I remembered some advice about making it move on with a water hosing. Wrong. That just made the snake cranky. It reared, spooky, and I moved on. It did eventually too.

>> pg12

POTENT GREENHOUSE GASES

from p1

Among the recommendations they make are to contain and responsibly destroy HFCs currently in circulation which "would avoid emissions equivalent to 89.7 gigatons of carbon dioxide".

Natural alternatives

According to Edwards, during operation refrigerant leakage is inevitable and, despite laws requiring degassing air conditioners and refrigeration equipment at end of life, this is the exception rather than the norm. "In Australia, we release about 60% of the refrigerants we import, largely for lack of enforcement and because it serves the industry to release refrigerants rather than contain or properly dispose of them. The developing world, where much of the industry growth will occur, may be equally irresponsible."

In addition to enforcing safe disposal laws for existing systems, green cooling proponents argue that synthetic HFCs should be replaced with so-called 'natural refrigerants'. These include CO_2, ammonia, hydrocarbons, water and air. Counter-intuitively, while some of these natural alternatives are themselves greenhouse gases, in this application they have a much more benign effect on the atmospheric balance. That's according to groups like *Refrigerants, Naturally!*, a global coalition of food and drink purveyors, including PepsiCo, Red Bull, The Coca-Cola Company and Unilever aiming to shift the industry towards natural refrigerants. Their literature stresses that "in the amounts used in refrigeration their greenhouse gas emissions have no or negligible impact on the climate".

Natural refrigerants and efficient design solutions

Natural refrigerants also offer significant indirect emissions savings. The Green Cooling Initiative, an industry outreach program facilitated by the German Government, estimates that the power generation to serve cooling systems accounts for 13.1% of global CO_2 emissions, an indication of the significant potential role of energy efficiency.

Tim Edwards and colleagues from the ARA argue that natural refrigerants, coupled with efficient design, could significantly reduce the energy demand from temperature control and therefore the associated carbon emissions.

A report by the Green Cooling Initiative provides an illustration of the direct and indirect emissions implications: "In 2006, 20% of global refrigerant emissions were from Mobile Air Conditioning (MAC) systems in passenger cars. These direct emissions result from leakage during manufacturing, operation, servicing, repair and at end-of-life". Furthermore, the report notes that a typical car AC can increase fuel consumption by up to 20%, with a corresponding increase in tailpipe emissions.

What's holding up natural refrigerants?

The global warming contribution of HFCs is not widely understood or acknowledged in the temperature control industry and consumer awareness is virtually non-existent. Tim Edwards finds it hard to hide his frustration at what he has experienced of academics and policy makers failing to address the problem or understating its significance.

F gases are included in climate models but methodology means their near-term warming impact is under-represented. Flammability of alternatives another hurdle, but is this outdated?

With atmospheric lifetimes of 20 years or less, the warming potential of most HFCs is short and intense relative to CO_2. However, the time horizon of most global warming impact models is 100 years so the concentrated warming potential of HFCs is artificially spread across a longer timeframe, causing a significant under-representation of its near-term impact. This nuance is more than academic when we are aiming to restrict warming in the near term to avert dangerous tipping points and runaway feedback loops.

Another, and possibly more significant barrier is the flammability stigma of the natural alternatives. HFCs are marketed as a safer alternative to natural refrigerants on flammability properties. Edwards argues that this is outdated and exaggerated. While critics can point to fire incidents when hydrocarbon refrigeration systems dominated in the nascent days of industry in the 1940s, air conditioning and refrigeration system engineering and safety standards have vastly improved and the rate of incidents worldwide is "vanishingly low".

Refrigerants Naturally! reports that their member organisations alone have installed more than 5.5 million hydrocarbon refrigerators worldwide since 2004 and they are safely chugging away without incident. They estimate that the combined savings from the systems equate to "around 33 million tonnes of avoided CO_2. This is the equivalent of the emissions of more than 6.7 million passenger cars over one year."

Further, while lab tests do support the claims that HFCs belong to a lower flammability category than some natural refrigerants, the natural proponents argue lab results don't represent real-world conditions. For one thing, HFCs are generally paired with highly flammable lubricants. If ignited, they can burn at a high enough temperature that the HFCs will also catch fire.

The key to safety, argues the ARA are high standards of system design and maintenance, not the use of synthetic refrigerants.

Enter the profit motive

Unsurprisingly, another critical hurdle to industry transition is the profit motive,

Tim Edwards, founder of the Australian Refrigeration Association: making the planet safer for our children.

which currently rests with the status quo. Natural refrigerants are abundant, widely found in nature and so the profit margin potential is slim.

The F gas market is highly lucrative and dominated by a few powerful players

Because of the huge costs involved in establishing manufacturing, production is confined to a handful of plants in the US, China, Mexico and Europe. This provides a relatively stable income stream for the large chemical multinationals who own them, including Honeywell and DuPont, who exert considerable market and political influence.

Low-greenhouse-warming-potential (GWP) synthetic alternatives have also been patented as replacements. However, this may be replacing one problem with another. They are not only expensive, but leave highly toxic bi-products, such as trifluoroacetic acid, in the atmosphere as they degrade.

Island nations lead transition push

Despite minimal coverage, the issue is not a complete blind spot for the international community. Led by small island nations, signatories of the Montreal Protocol have been debating what to do since 2009.

Timetable for countries to phase out HFCs

In October 2016 negotiators from 197 UN member countries finally reached a consensus in the Rwandan capital Kigali, which resulted in a substantial amendment to the Montreal Protocol. Potentially a big game changer, the Kigali amendment sets a timetable for countries to phase out HFCs, with developed countries commencing a ramp down in 2019 and most developing countries, including China, the largest consumer of HFCs, agreeing to start curtailing in 2024.

But the clock is ticking. Every new synthetic system installed will cast a long shadow – a typical air conditioning system may last 15–20 years. And hundreds of millions of people in the developing world are poised to add air conditioning and refrigeration to their households and businesses over the coming decades.

The *Refrigerants Naturally!* coalition argues growing economies should leapfrog synthetics altogether with natural refrigerants – coupled with best in class, highly energy efficient appliances, thus avoiding about 40% of the emissions from this sector globally by 2030 against the business-as-usual scenario.

Benefit to consumers and business, some Australian examples

ARA Vice President, Stefan Jensen, says consumers would benefit as well. Natural refrigerants are cheap and thanks to their higher operating efficiency, the payback on the cost differential of a well-designed natural refrigerant based HVACR system is as short as 3–4 years.

Already some large end-users are taking notice and installing new systems in Australia. Shecco, a "global accelerator" of climate-friendly heating, cooling and refrigeration solutions, has publicized a partnership with Woolworths, which will see the grocer flick the switch on their first CO_2-based refrigeration system this year. Shecco Asia & Pacific Managing Director, Jan Dusek reports that "with other leading retailers like Coles, ALDI and IGA, we are looking at some 20–30 CO_2 transcritical [industry talk for a natural refrigerant] supermarkets running in Australia in 2018."

Building specifications still fail to integrate energy efficiency engineering

Tim Edwards, whose urgency stems from "studying and advocating in the field of the environmental impact of the temperature control industry since 2008", is eyeing the real estate and construction sector too. "The Green Building Council and pretty much all building specification bodies worldwide fail to recognise and call for integrated energy efficient engineering across all of the building disciplines that determine temperature control efficiency."

Despite slow progress he remains optimistic. "Many organisations are driving change now. Despite the loud voice and influence of the synthetic refrigerants industry you will see hundreds of companies using natural refrigerant based technology because it is better in every way." ■

Sources:

US Environmental Protection Agency on HFC global warming impact: www.epa.gov/ozone-layer-protection/recent-international-developments-under-montreal-protocol

Project Drawdown: www.drawdown.org/

Refrigerants Naturally!: www.refrigerantsnaturally.com/

Green cooling initiative: www.green-cooling-initiative.org/

Shecco: www.naturalrefrigerants.com/

Royalla to enjoy new community hall

AFTER MORE than two years of huge commitment by the Royalla Common s355 Committee and the Royalla community, we are delighted that the Royalla Hall, at the Common, 317 Royalla Drive, has just been officially opened. The hall becomes a significant asset for the Royalla community and the Queanbeyan Palerang Regional Council.

The hall has been architecturally designed by Wombey to fit in with the rural character of Royalla with its metal roof, galvanized iron siding and the stonework elements. The hall reflects the heritage stone cottage ruin on site.

A variety of spaces are available for community functions including a large function space, meeting room, kitchen alfresco area and toilet facilities.

The hall has northern exposure overlooking the large open space of Royalla Common towards the hay shed and the creek. It provides a great space for the community to have functions, seminars, meetings and group activities as well as major events like the Royalla Country Fair.

The hall is ideally located near the large and spectacular grove of mature elm trees, a stunning setting for weddings and activities. Functions can now utilise both the grove and the hall for their receptions.

Funding has come from significant donations of time, materials and services from the community; grants from Southern Phone Company, Veolia Mulwaree Trust, Federal Government Department of Infrastructure and Regional Development, Queanbeyan-Palerang Regional Council and developer contributions.

This beautiful new facility is ready for the community to use.

— Royalla hall committee

It's time for a spring clean
Let us help

Community Recycling Centres

You can drop off for FREE:

- Paint
- Gas bottles and fire extinguishers
- Fluoro globes and tubes
- Household and car batteries
- Smoke detectors
- Motor and other oils

Bungendore Community Recycling Centre is located at:
210 Tarago Road, Bungendore

For more information and opening hours visit www.cleanout.com.au or call 131 555

NSW EPA Environment Protection Authority

Only household quantities accepted.

This project is a NSW EPA Waste Less, Recycle More initiative funded from the waste levy. Visit **www.epa.nsw.gov.au**

Queanbeyan household chemical cleanout 28 October

THE NSW Environmental Protection Authority is hosting a free household chemical cleanout on Saturday 28 October from 8am–2.30pm at the Collett St/ Morisset St carpark, 66 Morisset St.

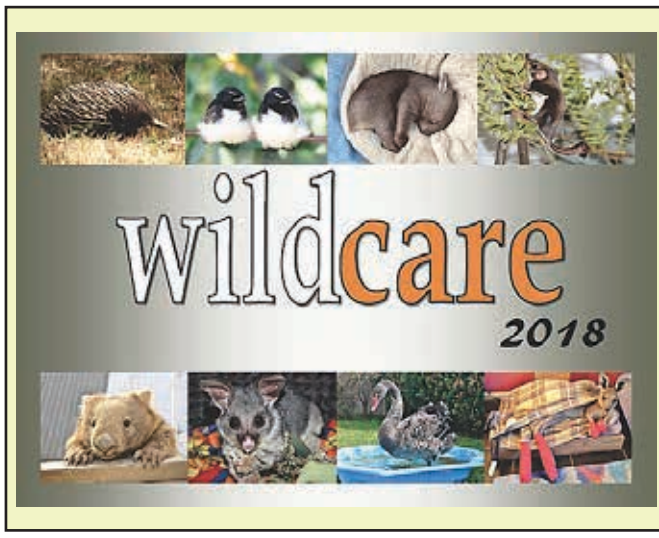
This is a chance to dispose of unwanted chemicals and products that can often be difficult to dispose of. For example solvents and household cleaners, floor care products, ammonia based cleaners, fluorescent globes and tubes, car batteries, motor oils, fuels and fluids, paint and paint products, pesticides and herbicides, poisons, gas bottles, pool chemicals, and hobby chemicals.

Only household quantities are accepted – 20kg or 20L maximum container size. For more information visit **www.cleanout.com.au**.

See advertisement on left for the regional facility at Bungendore, open to all, that takes other hard-to-dispose-of items on an ongoing basis. Note this is NOT the same service as the household chemical cleanout which is an annual opportunity to get rid of chemicals, pesticides, cleaners and solvents etc.

Bungendore Community Recycling Centre OPENING HOURS
Mon 7am–12 noon; Fri 12.30–4.30pm; Sat, Sun 8am–4.30pm

The Bulletin checked with the EPA and Bungendore is also the nearest ongoing facility of this sort for Queanbeyan or other regional residents. The funding for the centres comes from the waste levy and Palerang applied for the facility's funding when the EPA offered. The website on the ad provides more information if needed. ■



Wildcare 2018 Calendar

Available now – only $10 each. Money raised helps pay for animal treatments, medications, equipment, Vet, telephone and other bills.

Contact:
Alicia 0424 557 746 or calendars@wildcare.com.au to arrange pick-up/delivery.

BACK TO BEING MUM AND DAD AGAIN

With the help of the NDIS, Ron and Lynne's children David and Belinda are now independently living out of home. It's given them more time to enjoy their retirement and go from being full-time carers to just being Mum and Dad again.

The NDIS is now available in the Queanbeyan region.

Find out how to take charge of your future at NDIS.nsw.gov.au

NSW GOVERNMENT | ndis

small farms network
CAPITAL REGION

Working with Weeds – Practical Weed Management

14 October 2017 Sutton NSW
(address provided on booking)

Learn how to boost farm productivity and diversity by understanding the biology of weeds and why they do so well in your environment. Topics include:

- A weed identification session (bring along a bagged weed sample).
- A paddock walk, looking at grasses, broad leaf plants and developing your plant ID skills.
- Information about control methods, including organic methods and safe herbicide use.
- What to plant after weed removal and site regeneration.
- How land management can contribute to or minimise the problem.

Speakers **Alison Elvin** from Natural Capital
Neville Plumb, Biosecurity Officer, QPRC

Cost The field day cost is $25 (plus booking fee) and includes morning tea and lunch

Bookings, information Book your place at Eventbrite
www.eventbrite.com.au/e/working-with-weeds-practical-weed-management-tickets-36849437660

or follow the link from the Events and Workshops page on our website **smallfarmscapital.org**

More details: Alex James – alex@smallfarmscapital.org

Regional Landcare Facilitator
The Australian Government
NSW Local Land Services South East

'Whispering Earth'

Jo Victoria
at Suki and Hugh Gallery in October

FOSSILS, WEATHERED stone, broken shell, archaeological stratifications and landscape scars all carry evidence of life and natural forces over time. Flattened grasses on worn paths, windblown leaves and scattered sticks are more recent manifestations of interactions between people and nature.

Canberra-based ceramic artist Jo Victoria has drawn together her two academic disciplines, anthropology and fine art to present an exhibition of raw ceramic artistry in her new solo show **'Whispering Earth' opening at Suki & Hugh Gallery on 7 October 2017, 3–5 pm**.

Taking inspiration from many years working in and interpreting cultural landscapes, Jo has taken natural materials and mixed them with porcelain slip. When the organic matter burns out during the firing process, the results are beautifully strange and delicate works resembling weathered white animal bones or fossils.

> *"I'm looking for evidence of the past where the earth has been touched and changed. It is like looking for life itself, for a life force"*
>
> — Jo Victoria

Sometimes, in the stillness, the past seems to be omnipresent and the ground becomes alive with stories. It's like the earth is whispering.

Jo Victoria has a Master Degree in Visual Arts (Ceramics) from the School of Art, ANU and has exhibited widely in Canberra.

suki & hugh
GALLERY

EXHIBITIONS | ART | DESIGN

38A Gibraltar Street Bungendore NSW
www.sukihugh.com.au
PH: 62381398

Cabsav – a happily blended family

:: Wine chat ::
with Corrina Baird, (a Contentious Character)

CABERNET SAUVIGNON is a happy blended family of grapes – but it happened all by itself. Back in the 1600s, the cabernet Franc and sauvignon blanc had a dangerous liaison in Bordeaux and produced a child. If someone had not thoughtfully taken a cutting, this would have disappeared altogether.

Now it is probably the most popular red variety in the world. The oldest surviving cabsav vineyard in Australia is the Penfolds Block 42 vineyard in the Barossa, planted in 1885.

It is known affectionately in Australia as cabsav, even though cabsav sounds like a taxi with GPS or a dish with red sausages. We all know what we mean: it's a "big, full-bodied bold red".

In fact, the style of cabernet sauvignon depends on how ripe the grapes are at harvest.

- Unripe grapes are high in pyrazines, so they taste more like green capsicum and vegetation
- Ripe grapes are fruity with blackcurrants and black cherries and when overripe, can taste jammy.

Cabsav characteristics
FRUIT: Black cherry, black currant and blackberry.
OTHER: Black pepper, licorice, tobacco, vanilla.
OAK: Loves 9–18 months in French oak.
TANNIN: Medium.
ACIDITY: Medium.
BLENDS: It blends well with Bordeaux wines, Italian Supertuscans.

The most expensive cabsav could never be called that and would have set you back a cool half a million US dollars at auction. It's a Screaming Eagle 1992 from the famous Napa Valley in California. One wine connoisseur described it as "exceptionally impressive", and we are sure he meant the wine.

Look for cabsav from South America, Lebanon, Long Island, NY and Chile. In Australia, you can find complex and subtle cabsav in the Coonawarra, Margaret River, Hilltops in NSW and, of course, Canberra region.

Cabernet sauvignon is hardy and adaptable, thanks to its thick skin and the fact it ripens later in the vintage to avoid frost and rot. It even grows well in a desert (though we would never say that about our region).

One equally thick-skinned and contentious character was served Delicato Black Stallion 2012 Limited Release Napa Valley cabernet sauvignon at his inauguration. But it was wasted on him: Donald Trump, like George Bush, is teetotal.

Unlike Trump, cabernet sauvignon is a variety that can age gracefully for many decades. ■

Corrina pens her always-interesting wine column with sponsorship from Contentious Character winery in Wamboin

VINEYARD, WINERY, CELLAR-DOOR & KITCHEN
Our menu is designed to be shared and paired with our wines. Snuggle up to the bar or the fire and enjoy a complimentary tasting from the Founders Museum Collection of fine aged wines.
CONTENTIOUS CHARACTER
Saturday and Sunday 10am to 5pm!
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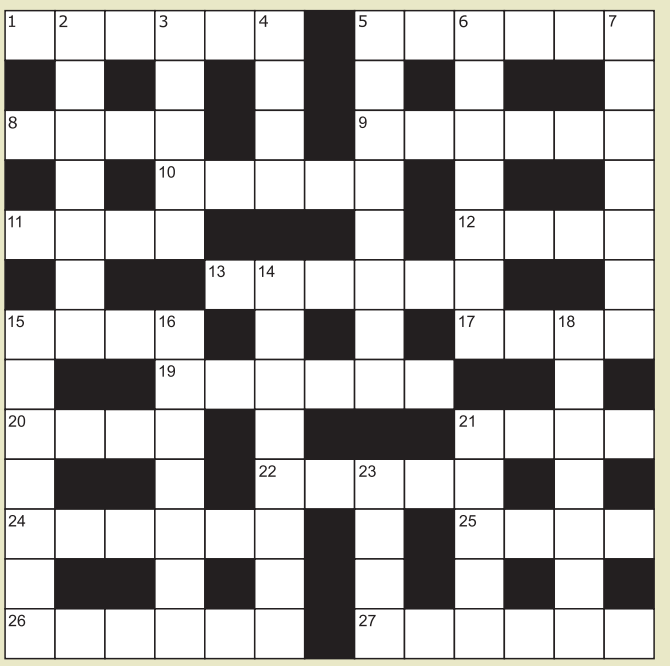
Crossword

Solution p12

Across
1 Emotional state (6)
5 Unit of measurement for water depth (6)
8 Baseball bat (4)
9 Overall appearance (6)
10 List (5)
11 Small bird (4)
12 Get out (4)
13 Large European flatfish (6)
15 Popular carbonated drink (4)
17 ____ *Lang Syne*, Scottish song (4)
19 University honour (6)
20 Muslim prayer-leader (4)
21 Stripes of contrasting colour (4)
22 Relating to the nose (5)
24 Type of polecat, used in hunting rabbits (6)
25 At the summit of (4)
26 Annually, every twelve months (6)
27 Chair of state of a monarch (6)

Down
2 Capital of Sicily (7)
3 Legendary outlaw, ____ Hood (5)
4 Narrated (4)
5 Pliable (8)
6 Lustrous material (7)
7 Having undergone chromosomal alteration (7)
14 With a need for promptitude (8)
15 For the most part (7)
16 Fan (7)
18 Sixteenth president of the USA (7)
21 Tony ____, former UK Prime Minister (5)
23 Closed (4)



EDITORIAL *from p8*

Better advice from a snake talk by Wildcare snake coordinator Wayne Alford, courtesy of the *Wamboin Whisper*.

Remove food and water sources – an issue if you have chooks that attract mice or standing water plus frogs as we did; keep grass short, and open areas en-route to the house – snakes don't like moving across open areas with likely predators; clean up hideouts around the house and sheds and patch any holes; also don't leave doors or unscreened windows open long, snakes can climb; use 'mouse' fencing for your yard if you want, and watch bird netting on the ground that can capture snakes.

Have a great spring and summer!

Maria Taylor

Nature, wildlife
inspire current Wood Works Gallery exhibition

by Stan d'Argeavel

PAINTER/PRINTMAKER Pamela Griffith and sculptor/carver Silvio Apponyi cover common ground with their inspiring works that invite you to share their love and concern for nature, flora, and fauna and the delicate position wildlife holds in a world obsessed with profit, the world which often involves the exploitation of precious environments.

While the artists work in very different mediums, they share a concern for nature and the limited resource we call Earth. They are also extremely gifted and know their craft well due to their many years of professional work.

Silvio Apponyi has a penchant for the three-dimensional representation of fauna and his talent and skill shows boldly through his expressive sculptures. From the smallest fossil to a majestic large animal Apponyi is a master of scale and proportion. He has the ability to bring out the best qualities of the material he selects to carve or cast in bronze.

Pamela Griffith works in watercolour, acrylic, gouache and oil. Her pen and ink drawings are detailed and stand on their own. They are what you would expect from such an accomplished printmaker.

She visits places like the Galapagos, Lord Howe Island, The Macquarie Marshes, Kakadu, and the Australian Outback where she sketches and paints what she sees as the diversity of nature. ■

L to R: *Pamela Griffith, Rob Purves President WWF Australia, Silvio Apponyi.*

The exhibition was opened by Rob Purves, President WWF Australia and continues at Bungendore Wood Works Gallery until December 10.

Across the radar screen

The following good-natured meditation upon our gardening habits comes in from our friend John Kerin. While it has a certain northern hemisphere flavour, the sentiments may be universal for God to contemplate.

GOD to St FRANCIS: Frank, you know all about gardens and nature. What in the world is going on down there on the planet? I had a perfect no-maintenance garden plan. Those plants grow in any type of soil, withstand drought and multiply with abandon. The nectar from the long-lasting blossoms attracts butterflies, honey bees and flocks of songbirds. I expected to see a vast garden of colours by now. But, all I see are these green rectangles.

St FRANCIS: It's the tribes that settled there, Lord. The Suburbanites. They started calling your flowers 'weeds' and went to great lengths to kill them and replace them with grass.

GOD: Grass? But, it's so boring. It's not colourful. It doesn't attract butterflies, birds and bees; only grubs and sod worms. It's sensitive to temperatures. Do these Suburbanites really want all that grass growing there?

St FRANCIS: Apparently so, Lord. They go to great pains to grow it and keep it green. They begin each spring by fertilizing grass and poisoning any other plant that crops up in the lawn.

GOD: The spring rains and warm weather probably make grass grow really fast. That must make the Suburbanites happy.

St FRANCIS: Apparently not, Lord. As soon as it grows a little, they cut it –sometimes twice a week.

GOD: They cut it? Do they then bale it like hay?

St FRANCIS: Not exactly, Lord. Most of them rake it up and put it in bags.

GOD: They bag it? Why? Is it a cash crop? Do they sell it?

St FRANCIS: No, Sir, just the opposite. They pay to throw it away.

GOD: Now, let me get this straight. They fertilize grass so it will grow. And, when it does grow, they cut it off and pay to throw it away?

St FRANCIS: Yes, Sir.

GOD: These Suburbanites must be relieved in the summer when we cut back on the rain and turn up the heat. That surely slows the growth and saves them a lot of work.

St FRANCIS: You aren't going to believe this, Lord. When the grass stops growing so fast, they drag out hoses and pay more money to water it, so they can continue to mow it and pay to get rid of it.

GOD: What nonsense. At least they kept some of the trees. That was a sheer stroke of genius, if I do say so myself.

The trees grow leaves in the spring to provide beauty and shade in the summer. In the autumn, they fall to the ground and form a natural blanket to keep moisture in the soil and protect the trees and bushes. It's a natural cycle of life.

St FRANCIS: You better sit down, Lord. The Suburbanites have drawn a new circle. As soon as the leaves fall, they rake them into great piles and pay to have them hauled away.

GOD: No!? What do they do to protect the shrub and tree roots in the winter to keep the soil moist and loose?

St FRANCIS: After throwing away the leaves, they go out and buy something which they call mulch. They haul it home and spread it around in place of the leaves.

GOD: And where do they get this mulch?

St FRANCIS: They cut down trees and grind them up to make the mulch.

GOD: Enough! I don't want to think about this anymore.

St Catherine, you're in charge of the arts. What movie have you scheduled for us tonight?

St CATHERINE: *Dumb and Dumber*, Lord. It's a story about...

GOD: Never mind, I think I just heard the whole story from St. Francis.

Ed note: We have kangaroos mowing our house lawn and spreading fertiliser (which can be 'mowed' in).

CROSSWORD SOLUTION

Across: 1 Spirit, 5 Fathom, 8 Club, 9 Effect, 10 Index, 11 Wren, 12 Exit, 13 Turbot, 15 Cola, 17 *Auld*, 19 Degree, 20 Imam, 21 Band, 22 Nasal, 24 Ferret, 25 Atop, 26 Yearly, 27 Throne.
Down: 2 Palermo, 3 Robin, 4 Told, 5 Flexible, 6 Taffeta, 7 Mutated, 14 Urgently, 15 Chiefly, 16 Admirer, 18 Lincoln, 21 Blair, 23 Shut.

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wood works gallery BUNGENDORE

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Year of the Haircut

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Why ? Because we've been taken to the brink by Donald and Kim, two men with the world's worst hairdos.

Then there's the red hair of a certain Pauline that was completely covered by a burqa with the lot. Not to mention the cut-throat razors in the hands of Malcolm's two political foes, Bill and Tony.