



April 2026

# The not so Wrinkly Rag

The Shed is supported by the Shire of Mundaring, Lotterywest, Mundaring Community Financial Services (Bendigo Bank), Department of Infrastructure, Transport, Regional Development and Communications, and the WA Department of Communities.

**Donations of \$2 and above are tax deductible – just ask the Treasurer for a receipt.**

## What's on in the Next Month or 2?

General Meeting	11am on 16 <sup>th</sup> of April 2026.
Wood carvers	7:00pm every Monday – contact Terry 0429-951-393
Fundraising	Next raffle on 9 <sup>th</sup> of May at Woolies.
Public Open Saturday (usually last Saturday of the month unless it's a public holiday)	2 <sup>nd</sup> of May - Open Morning 8:00am-noon, including driveway sale of surplus materials and equipment. Bacon & egg toastie and juice plus tea or coffee for \$5 - 8:00am–10:00am. All welcome, even family, friends, neighbours.
Thursday Theatre	10:30am on 7 <sup>th</sup> of May 2026 in the main hall – “The Best Exotic Marigold Hotel”
Committee Meeting	11:00am on 14 <sup>th</sup> of May 2026.
Deadline for Wrinkly Rag copy	5:00pm on 15 <sup>th</sup> of May 2026.
Wrinkly Rag publish	5:00pm on 17 <sup>th</sup> of May 2026.
Speakers' Circle	10:30am on 14 <sup>th</sup> of April 2026 – Mick Cotter: “26 years on the National Council of the Royal Flying Doctor Service”. 10:30am on 12 <sup>th</sup> of May 2026 – tba.

## Editorial – Ross Boughton

Wrinkly Rags are published by the Monday before the monthly general meeting based on information provided up to the previous Friday, being the day after the monthly committee meeting.

Please send articles of general interest (up to 2 A4 pages), photos, funnies, leads to [president@mundaringshed.org.au](mailto:president@mundaringshed.org.au) for inclusion in the Wrinkly Rag. Only **minimal** edits will be applied – **spelling and grammar errors** may slip through. 😊

Normal publishing rules apply – if you “borrow” material, please attribute it to the owner.

### Disclaimer

The information in this publication is of a general nature. The articles contained herein are not intended to provide a complete discussion on each subject and/or issues canvassed. Mundaring Community Men's Shed Inc does not accept any liability for any statements or any opinion, or for any errors or omissions contained.

## President's Patter – Ross Boughton



On the 28<sup>th</sup> of March 2026 we had our third regular “last Saturday of the Month” open mornings with a \$5 bacon and egg toastie and juice and tea or coffee from 8-10am. We made and sold 21 toasties! This event will continue while ever there’s interest. It is open to everybody, not just shedders, allowing us to show (and sell) what we make and let people know the full gamut of Shed activities. The next event will be on the 2<sup>nd</sup> of May (as the 25<sup>th</sup> of April is ANZAC Day). Please come along and support the Shed if you can; if you can help with catering, all the better.

We will also run a driveway sale from 8am-noon to clear some surplus materials and equipment.

## New Members

New members in the last month: Please welcome Dave Traylen, Caden Quartermain and Steeve Reeves.

## Around the Shed

### Some of the work from Building 5 (woodwork)

Stefan Millett with the beautiful “blanket box” and Gary Gamble, James Scully (to be sure, to be sure) and Dom Gerace with the lovingly refurbished garden seats.

And we get paid for their fine work. Thank you!



### Demolition at 3205 Jacoby

On Tuesday the 24<sup>th</sup> of February for 8am onwards we had a “working bee” to dismantle the wood store from 3205 Jacoby and transport it to 1 Morilla.

### Now re-built at 1 Morilla as the garden shed

Many thanks to:

- Max Hore
- Ken Parker
- Craig Wallace-Gibb
- Steve Pavey
- James Scully
- John Winsor
- Peter Mateusiak
- Andrew Klante
- Dom Gerace
- Peter Thomas
- Frank Ottosen

And not to forget:

- Pat Page
- David Bowden



## Wrinkly Smiles – Max Hore

**I'm tired of being the only one who cleans, pays all the bills, cooks, and does dishes in this house. I live alone, but still.**

**I once lived just a stone's throw away from a family who all died of mysterious head injuries.**

**My wife just stopped and said, "You weren't even listening, were you?"**

**I thought to myself...  
"That's a pretty strange way to start off a conversation."**

**An elderly man was on the operating table awaiting surgery to be performed by his son, a renowned surgeon. Just before they would put him under, he asked to speak to his son: "Don't be nervous, son, do your best and just remember, if it doesn't go well, if something happens to me... your mother is going to come and live with you and your wife."**

**My boss calls me "The Computer".  
Nothing to do with my intelligence - I go to sleep if left unattended for 15 minutes.**

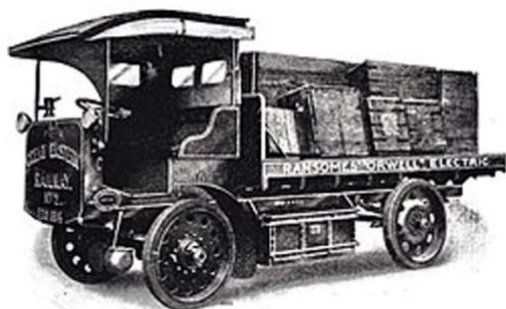
**SARCASM LEAGUE**

## Can We Drive on Free Power? – Craig Ward

So, what is “free” power, how did it come about and how does it work? When the brakes on your car, or a 1000-ton locomotive, are applied, they generate heat, a form of energy. Rather than this being wasted, it can be converted into electrical power. This system of converting heat and kinetic (moving) energy into electricity and storing or reusing it is known as the *regenerative braking system* (RBS). How does it function, and what are the challenges for an efficient operation?

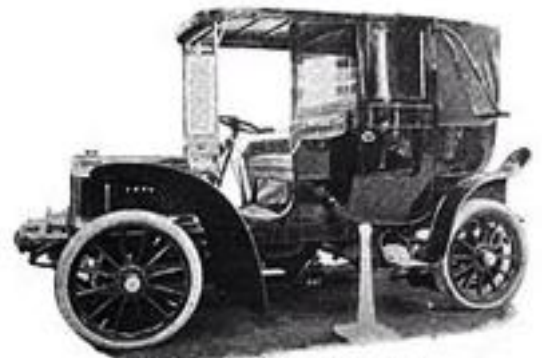
An electrical motor operates as power is fed in and causes a rotor shaft or axle to spin, creating kinetic energy. However, this can also be reversed, converting the motor to a generator. When the driver of a vehicle applies the brakes, the electrical input is cut, but the rotating axle continues to spin, which allows for reversal of the current flow. On a typical brake system, heat energy is generated and lost, but with the RBS this energy is fed back, charging the battery.

This RBS is not a new idea. Back in the 1860's a bright young spark, an American naval officer, came up with the idea to utilise this new-fangled attribute of electricity. His name was Frank SPRAGUE, and he set up the “Sprague Electric Railway and Motor Company”, developing many new inventions, including the RBS. One of the first road vehicle to use it was built by Louis A KRIEGER, who converted a horse drawn cab into a front-wheel drive machine that amazed the citizens of Paris in 1890. During WW1 the Orwell Electric Truck was introduced by Ransomes in England using RBS with manual switching of the current.



A Ransomes' 2½-ton "Orwell" lorry.

Ransomes Orwell Electric Truck  
WW 1 era,  
RBS switched on by driver.



KRIEGER-HYBRID-ELECTRIC BROADWAY

Krieger-Hybrid-Electric Vehicle 1904

Since then, there have been adaptations of this genius idea. A patent by J.S

RAWORTHY in 1903-1908 was introduced to the British tramway lines to use an “automotive regenerative control”. This brought economic benefits for tram operations. From these trams, RBS was introduced to the railways. In 1930 the Trans-Caucasus Railway (passing through the country of Georgia) commenced using RBS on their locomotives, which proved effective in mountainous country. This concept was later used by the trains between the Swedish iron ore fields in Kiruna and

the Norwegian Port at Narvik. With thousands of tonnes of ore transported, vast amounts of power are returned to the loco batteries, and the regenerated energy is sufficient to power the empty return trip to the border town of Riksgransen, where excess power is fed into the power grid. A brilliant system! Free transport and electricity for a town. Will BHP and Fortescue locos do the same?

There are many advantages with RBS, but there also many challenges and details to address.

Firstly, at high speeds and severe braking, limited energy is returned to the system. For road transport the ideal environment is in city traffic with slower speeds and “soft” braking. On the rail system, downhill travel brings reduced power input, and with easy braking, the regenerative system can feed energy to the battery.

Temperature and the charge within the battery affects the amount of energy that can be recovered. In the Pilbara region this would be a major consideration. Finally, complicated control systems are required for the changes between RBS and standard frictional braking.

Some of the locos on the iron ore mines are now being electrically (battery) powered. This has a major influence on the running costs and the environment. Once the batteries are fully charged, they can be partially recharged by the locos themselves.

In 2025 BHP introduced two battery-electric locomotives (BEL's) to their Pilbara mine sites, running from Mount Newman to the coast at Port Hedland. These locos were purpose built for the hot and harsh conditions, with an expected high performance and reduced emissions (*Scopes 1 and 2*)\*(see below). Each loco has a 7 MWh battery system and RBS. These machines are an amazing advancement from the first steam powered locos by George Stephenson around 1829.

Fortescue Metals Group (FMG) also has obtained two electric engines, dubbed the Infinity Trains, developed in conjunction with Caterpillar's Progress Rail division. Soon diesel fitters will be obsolete, and sparkies take their place! FMG purchased a British company, Williams Advanced Engineering (WAE), so WAE's expertise with batteries could be used to build the locos here, and to develop improved battery technology. This is only one of the many steps to help FMG make good on its ambition to be a global green energy and resources company. The development of this electric iron ore train will support FMG in its target to achieve net zero scope 1 and 2\*(see below) emissions by 2030. These "infinity beasts" will use our old friend GRAVITY on the downhill loaded run to charge the batteries for the free return trip. The batteries are a massive 14.5 MWh which have been charged once, and in theory will recharge continually on its 600 km downhill run and be enough to return the empty train without external charging infrastructure. There will be an annual saving of 82 million litres of diesel fuel, which amounts to about 234,000 tons of CO2 emissions. An efficient, low-maintenance, diesel and carbon dioxide free trip. The regenerative capability will remove the recharging infrastructure and additional renewable energy generation capacity, thereby helping FMG to reach net zero emissions by 2030.

The numbers of road haulage Battery Electric Vehicles (BEV's) are now increasing. In the USA these trucks are fast becoming the norm, but here the same cannot be said. The market for BEV trucks in Australia is small, and our truckies do *long* hauls, while the yanks do little runs of 200-300 kms. However, for suburban runs the BEV's are showing an appearance, with happy drivers. The trucks are quiet, have no fumes and are easy to handle. Into the depot, plug in, have smoko, re-load and the truck is ready to go. A driver who did an appraisal for a local delivery firm praised the trucks.

LINFOX TRANSPORT COMPANY is a major player on the roads, with their GREENFOX sustainability program. This is a large investment in the emission reduction future with three new logistic facilities under construction here in WA, South Australia and Victoria. They aim to have a five-star Green Star rating towards a carbon neutral transport system. Already in Queensland, there is a large logistic depot with 26 electric trucks based there. You will recognise these trucks as they are a lovely bright green.

In partnership with TOLL HOLDINGS, they will share \$28.6 million in electrification from government funding. This will be invested in trucks and charging depots throughout the country. Linfox's share will be towards 26 BEV's and charging infrastructure. Toll will receive \$9 million to support its \$67 million "PROJECT TRUCK VOLT". 28 BEV's and more than 30 charging ports at customer sites and Toll facilities are to be financed.

Road transport within the mining industry is also making an appearance. There is a heavy haulage semi-trailer truck weighing in at 115 tonnes that takes lithium from a mine near Bunbury to the port. These loads are bound for CHINA to be returned in the future in batteries for our trucks and cars.

Another player in the truck conversion business is **Janus Electric**. This company converts a truck from a dirty diesel/petrol machine to a clean battery powered marvel. Their Janus prototype battery-swap was unveiled in 2020. It is based on a Kenworth T403. The system is chassis mounted, with removable battery

banks, under the frame for easy access. The battery has enough power for the air brakes and air conditioner as well as the propulsion and control modules. This system is based on exchanging truck batteries and recharging depleted batteries during off-peak periods - and possibly contributing power during peak periods. The battery will be changed by robots at “refuelling” charging stations, a more convenient and faster method than the present system. The trucks operating range is claimed to be 500-600 km, and the costs much lower at \$0.73 per kilometre compared to up to \$2.00 for diesel. With fuel cost likely going much higher, this will be the future! The conversion will upgrade a truck quickly and cheaply, and the batteries can be exchanged. Also, the old batteries can then be used on static applications.

Australia’s electric truck market is gaining momentum, with options now spanning from last-mile city trucks to heavy-duty prime movers.

\* Definitions of Scope 1, 2, and 3 emissions in the context of net zero:

*Scope 1: These are **direct emissions** that are owned or controlled by a company, such as emissions from fuel combustion in company-owned vehicles and facilities.*

*Scope 2: These are **indirect emissions** from the generation of purchased electricity, steam, heating, and cooling consumed by the reporting company. Although these emissions occur at the facility where the electricity is generated, they are attributed to the company that uses the energy.*

*Scope 3: These are **indirect emissions** that occur in a company’s value chain, including both upstream and downstream emissions. This includes emissions from the production of purchased goods and services, waste disposal, and employee commuting. Understanding these scopes is crucial for organizations aiming for **net zero** targets, as they encompass the full range of emissions associated with a company's operations.*

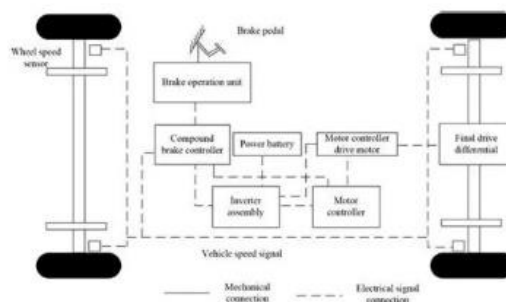
Acknowledgements: - Wikipedia, FMG BHP, LINFOX



Bollee-Mancel, late 1800’s, pretty flash.



Early Porsche, electric of course



Schematic view of RBS system