PLOD ESSAY: Alternate Energy

This article was inspired by a recent donation of "treasures" from the shed of *Lionel Wilson*. Thanks goes to his family and especially his daughter, Jennifer Paproth, for donating an incredible treasure trove collection from both Lionel and Greta's much prized collections. The Society is truly greatful to be able to ensure the objects are retained for generations to come.

Lionel was a State Coal Mine electrician and later established a private electrical contracting business in the Wonthaggi and District.

Alternative Energy is today a very well used term. Solar power and wind energy are rapidly augmenting and replacing brown coal and gas as the means of powering our changing world.

The State Electricty Commission became the main supplier of power to our town from the late 1960's, but prior to that time, residents utilised a wide variety of energy sources to "get the job done".

This collection of Lionel's objects illustrates the variety and ingenuity of those times.

PHYSICAL EXERTION/ELBOW GREASE

"McIlwraith" Stirrup Pump

This sturdy brass, copper and steel device has only one moving part, yet, allowing for adequate hose length, and the laws of gravity – is capable of removing water from any situation of flooding. Electricity and water are poor companions, so the pump was a mighty useful tool in the mines, although plunging a conductive metal mechanism into a possible electrified cesspool may be a risky business!

The simplicity of this tool is amazing. A torn washer could easily be replaced by cutting a new part from the tongue of your leather boot – provided you had remembered to carry your treasured pocket knife – the Rogers Bunny Knife was a trusty companion

Rebate/Rabbit Plane

"Stanley" made in the USA, this specialist woodworking tool was designed to cut grooves in timber and was adjustable. The modern equivalent would be the electric router. Stanley invented one of the most common tool – the *Stanley Knife".* Most sheds and toolboxes would contain at least one.

CHEMICAL ENERGY

Calcium Carbide Storage Container

Lights allowed the underground workers to perform their dangerous tasks, and, prior to the introduction of electric lamps. The carbide lamp was king. Miners' purchased their own lamps, along with the carbide powder to fuel them. Water dripped onto the powder which produced acetylene gas and thus a bright flame. The behaviour of the flame warned the miner of explosive or toxic gases in the work place, but also created a hazard.

The storage container has a heavy glass-lingo lid, designed to stop condensation forming and setting off the resulting bomb.

LIQUID FUELS

"Primus" Blowtorch and "All British" Pumpless Iron

Kerosene was a popular fuel for many household purposes. Sold in four gallon drums, it burned with a hot, but smelly flame. The blowtorch is hand-pumped to pressurise the fuel.

The iron was a relatively high-tech advancement over the old cast flat irons, which were heated on the stove.

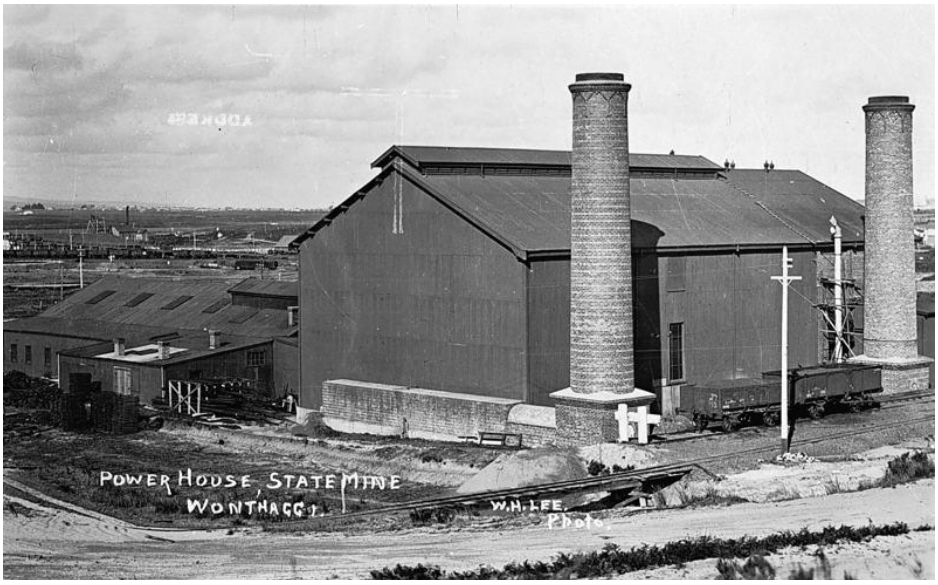
Kerosene is the basis of modern jet fuels.

BLACK COAL

Prior to the development of brown coal resources and the huge Latrobe Valley S.E.C. Power Stations, the mines of Wonthaggi became early adopters of electrical power.

The powerhouse at Central Area was established around 1912 and in addition to powering the mining efforts, the steam from the boilers was piped to the nearby hospital to be used for heating, cooking, laundry and sterilisation. It also supplied domestic power to the town.

State Coal Mine electricians were responsible for maintaining and repairing underground machinery, PowerStation generators and transmission poles and wires. From 1967, the powerhouse was closed and power was supplied from the State grid. The old building is still used by Donmix Concrete today.



Ammeter Clamp and Voltmeter

Used for measuring electricity, these are precision devices. The job of instrument maker was highly skilled. The leather storage case is also very well constructed, providing protection and portability for what was an expensive tool.

"Meg" Insulation Tester

This "Steampunk" device is used for inducing a current into the winding of electric motors and detecting leakage from the insulation allowing for fault diagnosis and repair. Repair was an important term in the past. Equipment was designed to be dismantled and fixed by mechanics, blacksmiths and engineers. Unlike todays' sealed – for – life, throwaway gadgets and gizmos. Many of the tradespeople

trained and employed in our mines went on to establish skilled workshops and businesses after the mine closures, and the old tools continued to earn their keep.

Lionel Wilson second from left with other State Coal Mine employees

Linesman's Belt

This sturdy leather strap enabled workers to work on power transmission lines and power transmission lines and poles. It had clips and a pouch for holding tools and spare parts whilst dangling precariously many feet in the air.

Today the job requires a fleet of cherry pickers, hi-vis and traffic controllers. Back in "the old days", it was a leather strap, wooden ladder and a prayer!

As I inspected these tools, I realised that with a drop of oil and a bit of a wipe with a cloth, they could all perform the job they were designed and manufactured for up to a century ago – ***MARVELLOUS!!***

Mark Robertson August 2021