We The People
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We the People 240 Power to the People

Good day to you. Something quite different to contemplate in this episode of We The People, something close to science fiction and something originated in Australia. Surely, we have all seen the TV series Star Trek, where warp engines send the Star Ship Enterprise into light speed and so they go where no one has gone before, the 'final frontier'. It's the science fiction stuff that captures our imagination and sometimes leads to real scientific breakthrough years later. It all begins with a thought and imagination and that is the miracle of a creative mind. It was Arthur C. Clarke the science fiction writer, who wrote about geostationary satellites in 1945. Other writers perceived of things to come and in that they stimulated invention. Writers, Mary Shelly, Jules Verne, Richard Bellamy and Rudyard Kipling where all sci-fi pioneers. So just imagine a glowing pulsating half meter cube which has the energy storage ten times greater than a Tesla battery and never wears out. This eerie glowing cube has enough energy stored in it to power 28 homes for a day, yet no emissions and using one of the most abundant materials on earth.

This amazing invention uses silicon and in it's pure form silicon is a greyish silvery heavy substance with some unique properties. A number of things such as glass, lubricants, electronic components, solar panels and a variety of medical equipment are made of silicon. The majority of sand found around the world is composed mostly of silica, which is an oxide of silicon. Now an Australian company oddly named ***1414 Degrees*** is about to publically list on the stock exchange as they have invented a very efficient way of storing energy in silicon. The process involves heating the silicon to its melting point which happens to be ***1414 degrees Celsius***, hence the company name. Using special containment vessels and high tech insulation, unused electricity normally lost, heats the silicon to its melting point. The energy is recovered later using air, gas or steam turbines for electricity or a straight heat exchanger if required and no emissions. It's cheap and highly efficient at 80 % for combined heat and electricity recovery. Typically a solar panel is around 15% efficient and has a life of up to 20 years but that efficiency is dramatically reduced in hot climates like Australia.

Well the company has successfully finished prototype testing and is now funded and ready to build a large scale unit. Surprisingly, the business is located in South Australia and when I asked them if the energy strapped SA Government was interested they said they didn't know and didn't really care and the reason is apparently because governments stuff up everything they touch.....ain't that the truth. Just to sum up, a Tesla lithium battery would cost about $7 million to store 10MWh of electricity while the Silicon storage would cost one tenth of that at just $700k. So storage of surplus energy on a large scale is now here and can dramatically improve base load supply. That's great news for all of us because it means the electricity produced from coal fired power stations normally lost, can be saved while renewable excess energy can similarly be stored and in the case of wind power this is tremendous news. Just in case you think you might build a container and melt silicon and do your own thing be warned, handling and manipulating molten metal at these temperatures is where the smarts lie but its apparently been mastered.

So this new energy storage unit is something to watch and may well revolutionise the electricity supplies of Australia and reduce waste and cost on a massive scale. It really is science fiction from the Star Ship **Free** Enterprise which is where most advances come from and not clunky wasteful government which will no doubt overlay so many regulations and rules it will threaten the project from inception. Oh how I wish we could beam the bureaucracy and politicians away to some other place and time and then whip off a couple of photon torpedos in their direction. Live long and prosper my friends.
Until next time this is Kent Bayley