

Vehicles Powered by Natural Gas in Australia and USA

Oil and Gas Australia 2013 Editorial

While many of the multinational oil companies are busy depleting many of Western Australian gas fields and processing it into LNG for shipment to power plants across the globe, one small international company OES CNG is changing everything.

Japan is now part of the Western world but China is part of BRIC (Brazil Russia India China) nations and competes with the West in infrastructure and mining development overseas. China is also helping bankrupt the USA by selling cheap products but not buying anything American.

Presently, 60% of the world's declining oil fields are used to make gasoline/petrol for automobiles. The USA uses half of this oil and much of that is from the Middle East. This attributes to the main cause of international terrorism for which the USA military has eleven aircraft carriers patrolling Middle East shipping lanes. In addition, as a result of the BP oil spill that wiped out a billion dollar environmental friendly sustainable fishing industry in the Gulf of Mexico, oil will definitely be taking a back seat to natural gas for world energy use.

OES CNG, is one of the Lincoln group of companies founded by Mr. John Lincoln in Australia and in the USA, that has made "No Brainer" significant progress in the home and commercial/fleet automotive re-fuelling and vehicle conversion market.

John, a mechanical/ocean engineer was sent to Australia in 1980 to help Woodside and Esso to develop their offshore oil fields. In 1983 he formed Lincoln Consulting to design and recommend solutions and processes, lay pipeline and provide mechanical engineering design and construction engineering to most of the oil companies for both production and refining. These were difficult times as the oil industry was in a huge recession and John had just purchased a home in Perth with two new children to support.

In 1993, Lincoln Consulting went international. One of the first projects was designing a 40 million dollar crude oil unloading terminal in Pakistan. This was followed by the design of a coal to methane plant in China. At the same time John achieved success developing subsea oil and gas pipeline and cable trenching technology and would become world leaders in this field by the year 2000.

By 2007, following John's fashion always thinking "outside of the box", he asked a question "with all this methane gas and with over a 300 year supply at our disposal, why can't we burn it in our cars?" He found out you could! (the Italian's invented it in the 1920's and New Zealand had thousands of cars on the road before they ran out of methane gas).

A small team was put together to research the viability of CNG fuel in the Australian automotive market. The results were outstanding. It was found that methane is;

1. The cleanest fuel with a carbon foot print half of coal fire electric and one quarter less than petrol (gasoline) or LPG (liquefied Petroleum Gas).
2. The safest fuel available, as methane has very narrow flammability limit; not even a high powered rifle shot into a tank could cause a fire. This is unlike petrol and especially LPG which is just too dangerous
3. CNG was selling in Victoria, Australia for 20c per equivalent litre of petrol. Petrol was selling at \$1.50 per litre and the LPG equivalent price per litre was \$1.04
4. There were already 4 million CNG cars on road in India, Iran, Pakistan and Argentina. Today there are 7 million.
5. It was confirmed there was over 300 year supply of a natural gas in Australia, America and Russia to supply the entire planet.

John knew then that he had a viable technology, but did not appreciate at the time what a formidable task was laying in front of him. Strange enough the government approvals were easy but changing the mindset of consumers was daunting.

John borrowed millions of dollars and turned his Melbourne factory into a research lab, then he designed and installed a natural gas pipeline, hired a fulltime team of oil & gas process and automotive engineers, and proceeded to change history for five long years.

In the beginning none of the CNG automotive conversion kits imported complied with stringent Australian emission requirements. There were also no CNG filling stations for cars available, so the first station was designed and installed at the OES Melbourne research lab.

In 2010, after the successful conversion of a dozen cars and filling with CNG, two more stations were installed. One in New South Wales to fill forklifts and the second was installed in a convenient store/ petrol station in Victoria that became Australia's first public refuelling station. Free fuel for a year was given to anyone who converted their cars.

Still not content OES CNG spent another two years developing a home CNG refuelling unit. First attempts failed trying to invent their own linear compressor. Other attempts failed in converting small diving air compressors. Finally, after three years, a prototype was successfully tested continuously for 2,000 hours. OES patented their device and it was much more superior to another product from Canada. The OES unit could fill a car in two and half hours (or in minutes if storage bottles were used). The competitor's device took eight hours to fill a car, was made of plastic, and hundreds of them had failed across the USA.

Several units were installed in Victoria and others were shipped to USA. There was some confusion with regulatory bodies initially in the USA and Australia as the units were not developed to any known international gas compressor codes and at the same time they allowed for CNG storage bottles (a key component for success), as otherwise customers will have to wait 3 hours to fill their cars at home. OES then modified and updated the compressor to be consistent with international high pressure gas codes and allow for storage and now, it has evolved into our OES VRA 2012.

Heavy lobbying in Canberra and Washington resulted in OES home compressors being not only endorsed as the Australian future refuelling method, but our systems were made excise tax exempt, saving customers an additional 33 cents per equivalent litre. Also as a result, LPG installation rebates are being phased out by the Australian government.

In the USA the Obama's administration streamlined the alternative fuel EPA approval process. Previously US 200,000 dollars had to be paid for every car model to the EPA for testing. Now only independent emission testing is required on any vehicle that is converted to run on CNG that is 2 years old or more and in the USA many new homes are required to be equipped with natural gas connections for home fill compressors. Also, many new car/truck manufacturers offer CNG models now and more are expected to be doing so next year

Now that OES is in the commercial implementation phase in the USA and in Australia, OES is initiating further plans to effectively educate the public, with an extensive informational campaign that will utilize all print and electronic media, including but not limited to radio/TV, billboards, the internet, as well as emerging social media.

It is hoped that some oil and gas producing companies could see the benefit of not only selling gas overseas but securing a future demand in the Western world for their gas. This also has the advantage of not supplying gas to unfriendly emerging markets that do not practise western ideals of public freedom and do not respect international intellectual property rights.

OES is now offering in the private sector 10 million shares of stock at one dollar a share and expecting that this offering's value will grow exponentially, as our solutions gain additional acceptance in the private sector...and in the future, OES is considering an IPO public offering, when the timing is appropriate.