



## Why oil prices are rising and how ITEZZE can replace oil fuel in Transport

**ITEZZE**

Why is oil price rising? It's simply because global oil supply peaked in 2020; Global production is now declining at about 3½ million barrels per day (bpd) every year. In 2019, the world produced 102 million bpd of natural oil (from wells, Natural Gas Liquids and fracked output) and 1½ million bpd of 'artificial oil' - Green diesel; alcohol fuels, recycled fat etc. By the end of 2021, the world was down 3½ million bpd; from 103 million bpd prior.

The 2012 ABC Catalyst Report *The Oil Crunch*<sup>i</sup> and the movie *A Crude Awakening - The Oilcrash* - Bing video; made in 2006 by ex-oil company CEOs, scientists, a member of Congress and a banker detail the issues. By the end of 2021, world oil production was down 3+ million bpd, but nobody noticed because the Pandemic had caused GDP to drop by 10-15%. Globally, a 1% fall in oil output relates to a 2% drop in GDP. A 2012 IMF study<sup>ii</sup> forecast oil prices rising 1400% to around US\$1300/barrel and GDP in some nations falling by 100%. It is now happening. ITEZZE is the one system which can replace oil in road transport, mines, farms etc. Energy supplied by oil in Australia is equivalent to 2x (twice) the amount electricity sold in Australia and no other system except ITEZZE, is able to replace the oil fuels in road transport; mines and agriculture. There are 2 reasons for this:

1. The energy needs to be moved from where it is produced to where the vehicle/mine/farm etc. is, and,
2. The existing Grid in developed countries like Australia can carry additional load if used in the ITEZZE format, because ITEZZE can take off-peak power and store it in swap batteries for later use. Hence, it doesn't matter if power is transported late at night or comes from solar in the daytime when there is no load requirement for it. ITEZZE can capture it when its available and store it for later use.

Other systems like fast charging of EV's doesn't work because:

1. Electricity Grids are at Peak capacity during the 6-8 am and 4 pm to 6 pm periods when people usually want to fast charge. Hence, fast or 'Supercharging' doesn't work with large numbers of EV vehicles;
2. Residential Grids supply on av. 5.1 KW/house; Tesla and other EVs use 5 to 22 KW on rapid charge and in high volume applications with **more than 10-20 cars** on a local Grid, **it can blow up the substation.**<sup>iii</sup>
3. There is a global shortage of battery material, but ITEZZE uses around ½ as much as other EV systems.

Hydrogen is not a practical energy source for vehicles. A French City found that Hydrogen when used in buses costs the equivalent of diesel at US\$5/liter.<sup>iv</sup> It is highly explosive and is inefficient when produced in a 'Green' format from solar power to split H<sub>2</sub> off oxygen in water (by the time it gets to vehicles approximately 30-50% of the energy is wasted or lost). Transport, farms and mines will require 2x the electricity sold last year, every year; wasting power is not an option. Australian Grain farmers use an average of 70,000 liters of diesel each year. ITEZZE can replace it; ITEZZE service station operators are able to buy ITEZZE AMHL, AHL and ASHL farm licenses to supply farmers with power for their tractors/harvesters during ploughing and harvest seasons.

3½ million barrels of oil each day need to be replaced every year to stop oil prices passing \$10/liter. ITEZZE can reach this goal by replacing 73 million cars/trucks with EVs each year. So, by 2031, 8.3 billion barrels of oil will have been replaced each year by ITEZZE EVs using electricity. This is equivalent to 1,086 million tons of oil use per year by 2031. Compare this to one group who want to produce 15 million tons of hydrogen/year by 2030.

Hwy freight trucks can use 0.6 to 1 liter of diesel/km. A trip from Brisbane to Sydney uses 1030 liters. In 2019, at \$1/liter it cost \$1000. At \$10/liter it will cost \$10,000. Freight, mining, agriculture and society cannot survive petrol/diesel at \$10/liter. In 1<sup>st</sup> World nations, oil makes up 7-9% of total economic cost. The pressure from oil price rises drives inflation on daily purchases which then causes interest rates to rise. A \$1/litre price rise for petrol/diesel can cost working families \$102/week (average small families \$40-60). A 2% interest rate rise on a \$457K mortgage costs another \$190/week. Overall, people are **\$232/week** out of pocket. This is why society needs to replace oil, which is in terminal decline, with ITEZZE. Government knows about the problem; hence there is vast opportunity for ITEZZE service station operators to profit by selling and/or generating electricity. ITEZZE expect Hwy trucks to be operational in mid-2023 with EVs for family use by the end of 2023.

<sup>i</sup> [OilCrunch - Catalyst \(abc.net.au\)](http://OilCrunch-Catalyst(abc.net.au))

<sup>ii</sup> *Oil and the World Economy: Some Possible Futures* by Michael Kumhof and Dirk Mui; IMF Working Paper October 2012 WP/12/256 Authorized for distribution by Douglas Laxton

<sup>iii</sup> Information on most of these issues can be found at [itezze.com/technical](http://itezze.com/technical)

<sup>iv</sup> <https://electrek.co/2022/01/11/city-cancels-order-50-hydrogen-buses-after-realizing-electric-buses-best/>