The End Of Fossil Fuels - The Solution

I genuinely believe that the end of the need for fossil fuels to generate electricity and to replace gas with wind and solar by applying tried and tested principles in the water industry in under 10 years. Alan Wright – BSc (Hons) CEng MICE

I am a Chartered Civil Engineer and during 25 years with Anglian Water I designed and built Service Reservoirs and Water Towers to deal with daily demand fluctuations. We pumped at night to burn off excess electricity and filled our service reservoirs when water demand was low. I designed and decided upon the pumping stations required, and the size of storage needed. All this was constrained by the location of that storage and the distribution network available to us.

The need to avoid mixing water from some sources and reversing flows in some pipelines complicated my design considerations beyond that of power supply. The predictable and unpredictable nature of both water supply and power supply demand is very similar. Supplying a single zone from multiple water sources is common in water network design and in power networks.

My R&D company (WrightSolar Ltd) was looking to integrate solar thermal innovations with an electric car to power a house. I wanted to feed energy into a house and the grid from my current Golf EV electric car at high demand. I have had PV panels installed, and await my Tesla Power Wall for home storage of electricity.

The electric cars of today can be the storage reservoirs of our power distribution networks. I was working with an electrical design expert to help develop my original concept of using electric cars for power storage, but I find that my idea was not original. Others have already proven the concept, manufactured a car that stores power, and that car returns its electricity to the grid. They have completed trials. The development of a new Nissan Leaf, a car which returns electricity to the grid, was invented by Nissan in response to the Fukushima nuclear disaster. The meltdown at Fukushima nuclear plant which has caused much of the world to ban nuclear power has lead to the invention of the ‘Powerloop’ enabling vehicle-to-grid power transfer.

https://octopusev.com/ev-hub/turning-disaster-to-opportunity-the-nissan-leaf

https://octopusev.com/powerloop

There is an ‘oven ready’ solution which would phase out gas fired powered stations almost immediately. Transferring my skills honed in the water industry to manage water networks on a national scale will have a huge and positive effect .

As an Engineer I need to present the scientific and numeric justification for my conclusions. Cooking is a more familiar activity to many people, so to help understanding here is the recipe for success:-

Ingredients

Nissan Leaf Electric Car - £35,000 (40 kWh lithium ion battery)
Tesla Power Wall (as installed in my home) £10,000 (13.5 kWh lithium ion battery)
Connection to Grid (included)

Method

Buy an electric car (Nissan Leaf or similar but any car with with the ability to export to the grid like the Nissan Leaf will do)
Charge up at times of low cost energy supply. When the wind blows or the sun shines are good times, as is midnight to 4 am when demand is low.

Discharge power stored in the car battery to your home battery (with surplus being exported to the grid) at a profit to the customer either before your journey at the morning peak demand if you know your journey is short, or after your journey at the evening peak demand. The customer making a profit on buying and selling electricity will help pay for the cost of buying an electric car.

Whilst it makes sense at a local level for the individual customer, it makes even more sense to look at the national picture. The average usage of electricity in a home is 8 KWh per day so a 40KWh battery will provide 100% of the energy for an average home for 5 days assuming no wind and no solar and no periods of low cost energy. (Assuming no wind and no solar and no periods of low cost energy is not a reasonable assumption.)

Not all homes would need to buy an electric car and home battery storage. Perhaps only 20% of homes need a car and home battery storage to benefit the remaining 80%. Every one benefits immediately with the first customer storing energy because more low cost green energy is used and less gas powered 'peak energy'. Indeed, if every home stores cheap power then there will not be periods of cheap power.

Details of trials in which energy has been fed back into the grid from electric cars can be seen using this link:-

https://www.flexi-orb.com/electric-vehicles/vehicle-to-grid/

I am a very successful inventor and in 2010 I invented the ShowerPowerBooster, I have a UK patent granted. My invention is the only pump in the UK which scores a full overall 5 stars in customer reviews onTrustPilot. We have sold the pumps in New Zealand and all over the world and I have retail sales of over £3Million.

Despite this, I have been unable to get my innovative energy saving pumps used by Councils in the UK. In my home town of Norwich the technical experts advising Norwich City Council refuse to even speak to me. I fear individuals with vested interests only offering more expensive solutions have blocked me since 2012 . There is the real risk to any innovative idea when up against other ideas backed by money and influence.

In a similar way I fear battery storage using privately owned cars gives too much benefit to the public and not enough to the big corporations. The oil and gas industry and its lobbyists are threatened by anything that might reduce public dependence on them.

This solution only works if suppliers give a commitment to buy power stored in batteries from homes and commercial premises. I am aware that some suppliers refuse to pay anything for exported power. Customers will not invest in cars and batteries if Energy Companies that buy energy can be bought out by those that do not (and closed down).
We need all new electric cars to be fitted with power loop
We need cars without power loop to have power loop fitted retrospectively

Kind Regards

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Inventor of the ShowerPowerBooster
https://showerpowerbooster.co.uk/
https://www.trustpilot.com/review/showerpowerbooster.co.uk