

## A Windyday Manifesto

As we head into the Ides of March, we are faced with another crucial time in world history. We have students that will be asking our political leaders to finally take action on the climate crisis. I have been keenly aware of our sources of fossil fuels since I used to work in the energy industry in Wyoming over 40 years ago. Working outdoors I developed an appreciation for the power of the sun and wind in that harsh climate. I started out my academic career in the Engineering School of the University of Wyoming which was highly regarded for their Petroleum department. But I also was in close contact with the Atmospheric Sciences department and so the climate is not a foreign subject. Even though I went into the health field these issues are still a concern, now more than ever. Forty years after Exxon produced a report revealing the dangers of continued use of fossil fuels, we are influenced by the propaganda machine that they set in place to deny that same report. The machine is on full throttle and fighting for it's life. Please show no sympathy for this machine, since it has never shown sympathy for human life. Like the bankers of old, they have funded both sides of the upcoming battle and now I feel I am an outsider.

I met with the Swiss students involved in the first Climate March in our area. I gave a speech when they offered the microphone to interested people and was well received. I was invited to talk with the organizers after to discuss the Windyday Concept. I explained that I had offered a course at our local professional school to promote electric vehicles and renewable energy. They were horrified and did not want to hear anything about batteries. Of course they have been educated with the lies that the fossil fuel propaganda machine has been spreading. So I am forced to tackle the myths that people have about batteries and renewable energy before we can talk about a plan of action.

Fossil fuel was an amazing fuel. Especially gasoline. It can be transported and pumped rapidly into a vehicle. It is convenient. But there is a price. We have known of this price for over 100 years. It was in 1912 that the first article that warned us of burning coal. But even Exxon has known since the 1950's, and they did a definitive study in 1977 which confirmed these findings. Just like the tobacco companies, they hid the studies and hired a PR firm to cast doubt in the public's mind. Today anyone pushing this narrative deserved to be criminally prosecuted. Before we continue I would like to dispel some of the myths they have been pushing.

**Batteries cannot be recycled.** With present day technology they are recyclable at 90%, with one company approaching 100%. The waste products of coal and petroleum refineries are toxic and are 0% recyclable. Worse yet, the dregs of refineries are labeled "Bunker Fuel" and power our container ships. 15 of these ships pollute as much as all the vehicles on earth. There are over 10,000 of these vessels. You can smell them from kilometers away.

**You have to heat batteries to high temperatures to make them.** Yes, for a short time. Did you know that one form of Tar Sands extraction requires an entire tar field be heated up to 400°C for a period of weeks to months? Tar Sands are the dirtiest form of energy on earth and we should have never started relying on this as a source of fuel. The energy used to make a battery lasts 25 years. Any energy for a fossil fuel is used once and then the CO<sub>2</sub> produced is between 2.4 to 2.7 kg per liter for gas or diesel. The CO<sub>2</sub> gases last in the atmosphere for centuries.

**EV are not ecological.** While it takes energy to make a battery, it can be used for 25 years. It can last for 10 years in a vehicle and when it's oxidation becomes too great, it has to be replaced in the vehicle. But since an EV motor does not wear out, you can use that vehicle easily for another 10 years with a new battery. The used battery still has 60% of it's capacity, and it can be used for industrial storage for at least another 15 years. And then it can be recycled and reused to make another battery. Batteries are a technology and improvements are always possible. Even if we come up with a better battery, whatever effort we use now will be put to good use for 25 years. And

if we don't come up with a better technology, that battery elements can be reused to make another battery for another 25 years. Why haven't you asked yourself if oil and coal are ecological?

**EV uses a coal or nuclear plant for an exhaust pipe.** Why is that important? If you say coal plants are not good, we both agree that we need to find an alternative. Thank you for supporting my argument. I can make the same argument against an ICEV. Do you know that the oil industry uses 43% of all the electricity in the world? I am not counting the energy used to explore, extract, transport two or three times, refine, and then transport another one to two times. Just to refine a liter of oil requires 1.5 kWh of electricity. And this does not take into account the energy used in producing the chemicals needed in the production of petroleum, especially from fracking or Tar Sands. So not only does your ICEV also have a coal plant for an exhaust pipe, it produces another 2.5 kg of CO<sub>2</sub> on top of the electricity used.

**The IEA head said that EV would only diminish 1% of fossil fuel use and could not be used in buses and trucks.** Why did he have a different speech in 2010 when he proposed an Accord with the OECD countries to develop a charging infrastructure in Europe and to have 40% EV by 2017? He was using a form of speech called Gaslighting. We used to call it lying. He also falsely stated buses, trucks and ships could not be electrified. This would be news to the Chinese firm BYD, since they have a line of commercial vehicles. And there are two electric ferries already in Norway.

**I won't buy an EV unless I can drive 800 km and can charge it in 5 minutes.** I hear this often from foreign workers in European countries. They need a vehicle for 50 weeks a year but they have one vacation of two weeks and drive a long distance for two days a year. There are some compromises we have to make to drive electric, especially since our charging network is not well developed. This can change in the future, but it is possible that there needs to be a change in our attitude about a vehicle. Young people are already changing so their opinion counts more.

**The charging system is not well developed.** Correct. This is by design. Did you know that in 2010 the IEA and the OECD signed an Accord to develop a charging infrastructure for EV? Germany was supposed to have one million chargers by 2014, France by 2015. Switzerland was on board for about 200,000. The goal was to have a wide range of EV available so that we would have 40% by 2017. Today Germany and France have less than 14,000 chargers and there are less than 2% EV. We will discuss why this happened later. Did you know that in the early days of the automobile you had to buy gasoline in a pharmacy? They had to develop a distribution network also.

**If everyone drove an EV our electrical grid would crash.** As I said before 43% of all electricity in the world is used by the petroleum industry. So we would have more available for other uses in case this was possible. But the grid would become more efficient as more people have an EV. Most vehicles charge at night and this is when the grid has to power down, which creates inefficiencies. By flattening out the curve, this lowers the cost of electricity. And an EV is also a battery and with vehicle-to-grid (V2G) technology, this is the beginning of a smart grid. Battery storage is a key part of making renewable energy possible to this is positive.

**Batteries are toxic.** They are some using metals that are toxic. There are continuous improvements and Tesla is using less cobalt than 10 years ago in their batteries. Some stationary batteries use salt water and can be disposed of in a landfill. But petroleum and coal ash are also toxic. And the chemicals used in fracking and Tar Sands are the most toxic on earth, and both procedures require millions of liters. The rate of cancer in the villages around Tar Sands mines are at over 80%, and these are cancers that have 20 to 30 gestation rates. In another decade, we can be seeing 100% cancer rates.

**We can't power our world without coal and gas.** Have we tried? We would need to be making more solar panels and wind turbines but in 1941 America did not have enough weapons to fight WWII. Within 6 months they transformed their industrial output to produce weapons. Unfortunately they have continued that production, and often the weapons are used on the people that live on petroleum reserves.

**Why should we change if petroleum prices are so cheap.** The market is being manipulated by the same people that are manipulating the news media. Until June 2014 the price of a barrel was over \$110. It dropped over one half, and at one time approached \$35. This was just after we signed the Paris Accords, so there were political motivations involved. Why did the price drop? There were several reasons. One was to weaken the economies of Russia, Iran and Venezuela. Another was to lull the public into buying larger and larger ICEV. If the plan to invade Venezuela, Iran and eventually Russia are achieved, do you think they will keep the price low? How would you feel if you had to pay \$20 or \$50 a liter for fuel? Or if you couldn't find any?

**Who doesn't want to change our present system?** The present system doesn't want to change. That includes the fossil fuel industry, the financial industry, the pharmaceutical industry (organic chemistry is based on petroleum), the automobile industry (the traditional ICEV makers have not invested in battery production and so are not serious), the agricultural industry and the insurance industry. Shouldn't insurers be interested since they would have to pay for the damages caused by a changed climate? They have made investments in fossil fuels and would like to have a return on investment until 2050. This is why many cities touted that they would be renewable by 2050. But we can't wait, we have to change now.

**We have to change by 2030.** This is what is touted in the IPCC report. Unfortunately this report is too conservative and most climate scientists are saying that we are in a climate emergency now. Unfortunately they are correct and it is too late. But they all agree that we have to get off of fossil fuels as soon as possible. I would like to propose a concept that would help already by 2020.

## **THE WINDYDAY CONCEPT**

Cities should declare a Climate Emergency until the national governments change their policies. Each city should build worker coop factories for batteries, solar panels, wind and tidal turbines, tiny houses. We have to train our people for these Green New Deal Jobs. We have to have local food supplies until the transformation of trucks, planes and ships to electric is accomplished. We need to grow bamboo and hemp. This can help replace plastic but they can also help the soil reestablish it's micro-filamentous structure. Hemp is a plant that can detoxify the soil. And it is seven times better as a carbon trap than trees. The Paris Accords relies on carbon capture as well as leaving fossil fuels in the ground.

## **BEWARE THE IDES OF MARCH**

Young people want adults to take the climate seriously. Adults will listen and there will be a peaceful transition.

Dream on. Switzerland is the home of Davos and it's powerful financial industry. Swiss adults have bought into the media manipulation and will be reluctant to change. The Swiss politicians are brought into the board of directors of the industries that do not want to change. Swiss economy is based on fossil fuel use and the weapons industry which has become the goon squad around the world. Money is a powerful motivator, but the genetic pool could be stronger.

**It is time for you to make yourselves heard. There will not be another opportunity.**

Will Swiss politicians and financial leaders finally discuss with the people the consequences of losing their investments which they had hoped to continue until 2050? This will radically change our society. But the Changed Climate is at our front door. We can ignore it no longer.