

It is the 21st century and by now most people will have heard of peak oil and may have heard of the problems we will be faced with when oil begins to run out. The severity of the situation surrounding oil only seems worse when the brief time in human history in which this oil has been used up is taken into account. The beginning of our oil use began about 150 years ago and here the foundations of our modern world were laid down. Now take into account the fact that it took millions of years for these oil wells to build up and after 150 years we are beginning to see signs of oil depletion in many oil fields in the world. Since the beginnings of the oil industry our use of oil increased exponentially as we found more and more uses for it and developed newer methods of extracting larger quantities of this black gold from the ground. The oil was seen as an endless supply and because no one thought it would ever run out it was recklessly used throughout the years. We inhabit a world where our entire way of life depends on abundant, inexpensive oil. This era is now drawing to a close. Five years ago, the Hirsch report published by the US department of energy concluded that the world has “never faced a problem” as difficult as peak oil, adding that: “without massive mitigation more than a decade before the fact, the problem will be pervasive and will not be temporary”. Oil peaking will be, it warned, “abrupt and revolutionary”. We have reached a point where we are dependent on oil and if nothing is done about the issues facing us we will be facing a bleak and uncertain future.

Ireland is a good case study to work with as we are an island nation with minimal natural energy resources. Here in Ireland we have a large energy security problem as we have no natural oil wells and only small gas fields. We have to import in the region of 90% of our energy needs (mostly non-renewable sources) from other countries.. With Ireland so dependent on foreign energy supplies the coming decline of oil production will have a devastating blow on our society and quality of living. In Ireland we require in the region of 190,000 barrels of oil a day. To put this in perspective a barrel of oil contains ~159 litres of water; an Olympic swimming pool (25m x 50m x 2m) contains 2,500,000 litres of water. This means we use on average ~12 Olympic pools of oil A DAY in Ireland alone and at present there is no viable energy replacement source for this oil. As global production levels of oil decline, the respective countries and companies in control of the oil wells will be in control of who gets what oil and how much of it they get. There will also be complete control over the market and prices as the oil begins to be rationed. This situation implies that there will not be a direct cut off on oil sales rather the oil will continue getting more expensive until the

countries with the oil only have enough for their own needs. The direct impact to Ireland will come in many stages as the total amount of oil available decreases over time. If oil were to disappear overnight, the entire developed world would come to a standstill. I will discuss several different areas that will highlight the extent of just how much we really rely on a steady oil supply.

One of the more severely hit areas will be the transport industry and it will affect all the people of Ireland. With almost 2 million cars in Ireland each of which needs oil based fuels to operate the beginnings of a problem appear and this is without mentioning commercial vehicles such as vans or trucks. Yet a car in fact the fuel needed to run the cars is not the only fuel the car uses. If we concentrate on the life of a new car before being purchased we see that it has to be assembled in a factory using a large amount of energy to run the automated assembly line, then when finished, to reach Ireland the car has to travel by ferry from the country it was built in. Overall before we buy a car it already has a large energy footprint prior to any use. Therefore as peak oil passes and oil prices begin to rise due to scarcity everybody will be affected and many may not be able to afford to travel. We have seen the effects of rising fuel prices in the past and there was outrage over it. Currently prices are rising again but this time they may not fall again, how will the people of Ireland react to this? Tensions among people would rise as fuel expenses rose and people were struggling to afford it. Another major hit area in the transport sector is the aviation industry. Holiday makers and business men alike will be faced with increasing difficulty as the crisis develops, less and less people will have the opportunity to travel abroad for recreational purposes or for family matters. As it progresses we it will no longer be viable to purchase goods manufactured in foreign countries as the fuel will not be there for this 'needless' transport. Things will change to the state that while it will still be possible to contact people in other countries, travelling across long distances will become very difficult and time consuming leaving the world in a strange mentality.

When considering other areas that depend on a steady supply of oil it is important to realise that the majority of international trade is only possible with the use of immense quantities of oil per day. Just think about where Ireland is situated, we are a small island on the edge of Europe, meaning anything brought into the country will have to arrive by boat or plane, both requiring large amounts of fuel in order to reach Ireland. When prices of oil and oil based fuels begin increasing we will be hit worse than mainland Europe due to our isolation there will be a direct relationship between the rate at which oil prices increase and the rising prices

of commercial goods. These price hikes will strike every industry and as the pressure over inflated prices continues to increase until a point is reached when things will collapse. Businesses will stop being able to profit from goods imported into the country as most people simply couldn't afford the prices of non-essential items as cost of running their basic needs in life became too expensive. This will start a vicious circle which will snowball on from first smaller businesses that will have to let staff go or close down as profit margins dwindle. These will be followed by other businesses in increasing order of size until even the giant names in each industry such as Tesco or MacDonaldis will no longer be able to sustain operating in so many locations or employing such large numbers of people. The situation is just as bad in the other direction as exporting Irish companies will begin to buckle as exporting costs increase until in this sector too jobs will be lost and businesses closed down. A globalised economic system would be crippled by a collapse of the financial markets, since the confidence that underpins transnational trade would evaporate. Businesses and nations will only trade with others if they have a high confidence of being paid something of value. Where does that leave a resource-poor island like Ireland, with precious little to trade? This disruption in the country would destroy the economy and plunge the country into a far worse recession than the one gone through over the last few years. Ireland will become a poverty in the sense of its meaning today stricken country as the price of goods increases relative to the money people will have. This will alter the country from the fairly well off to being reduced to nation struggling to make ends meet. When the problem has escalated to this extent even renewable energy technologies won't be an answer either. The economic consequences of peak oil will ironically cripple our ability to invest in alternative energy or even to finance the extraction of hard-to-reach oil reserves, which will most likely stay in the ground indefinitely. Meaning if we don't act while we still have the chance we will no longer have the opportunity to develop large scale energy production from natural abundant sources as we have the opportunity to do now.

Take a look at the new world which is developing, a place where travelling long distances as many of us are used to will stop being a reality, a place where the goods and services we rely on now will only be available to the select few who can afford to pay for luxury goods that are now common place items. A world where people will be restricted to a small area of travel and little selection of food or household items as we know them. This is an alien place that is fundamentally different from our current lifestyle, a completely different society which will be forced to develop rapidly. When a society changes the way of life for the people also

changes and in this case the change is so extreme it will have severe effects on the mind frames of people. Under this immense pressure of change many people will not be able to cope with the situation and their mental stability may come into question as the world they know was warped. People would be forced to be a lot more self sufficient as it would not be easy to travel far to get anything, giving rise to more connected local communities out of survival needs. Also without the liquid fuels extracted from crude oil the worlds food production will fall sharply as modern farming involves large tracts of land which need machines to maintain them. As this falls away the world will be faced with serious food shortages as conventional farming methods will not be sufficient to feed the world's rapidly growing population. This widespread hunger will even affect many developed countries as the population density in many areas is far too high for the arable land in the same area to support. This combination of people in a state of confusion and turmoil over the change in their lives and the spreading hunger poses a serious risk of chaos and disorder to break out. People who had been becoming more and more agitated as things became worse and worse would begin to find places to cast blame on as tensions across the country rose.

I have discussed many negative points yet things do not have to go like this, this is all based on our current wasteful ways and oil being 1 of the sole liquid fuel sources in use. The situation which is developing can be altered but our only chance is to alter the way in which we view and treat our environment. While we will still need a fuel source to power our society there are more sustainable sources then oil. The reason oil seems to be the best option available for power output is due to 150 years of human ingenuity has been put into the extraction of oil and the synthesis of other useful substances from the crude oil. If this same level of effort was applied to a renewable energy technology such as wind or solar power we would be advanced enough to replace oil with green renewable energy sources. Right here in Ireland we have some of the best conditions in Europe for the generation of electricity from wind power. If utilized correctly we could begin to reduce our energy imports to 0% and eventually begin exporting our own energy derived from renewable sources at a time when energy prices will be increasing. Leaving it largely in Irelands interest to develop a large scale wind energy production scheme and as we progressed our development will be highly valuable world wide as countries turn to alternatives to oil. While there are many problems with changing from a fuel based energy development to a wind based energy the benefits of changing are immense. We could fully introduce the electric car as a replacement for liquid fuel run cars once the system was up and running, we would be cutting out a very large

proportion of the damage we cause to the environment. We would also be able to put this sustainable energy to use in attempting to repair some of the damage we caused through our abuse of the environment.

As citizens of Ireland once we began working on becoming self-sufficient we would undergo highly positive mentality changes as we became more concerned with our impact on the environment and became a much more restrained people. We are fast approaching the stage past which our efforts to function without oil will fail, at the moment we are aware of the approaching problem and have to make a choice. We can continue as we are and deal with the problem of depleted oil wells when it comes around or we act now and begin developing the technologies needed to wean off oil. As it is a choice between a gradual chosen change in lifestyle compared to a forced drastic change in lifestyle once oil is gone. There are people currently in the world who deny that peak oil is happening saying we are ok for a long while and there is no need to change our current lifestyle. This strikes me as a very foolish approach as if they are right then still the problem will surface eventually so why not act now. Would it be such a bad thing if we stopped using oil and polluting our atmosphere with its combustion by products, is it such a bad thing to develop the technologies that will be needed by the generations to follow after us? These people who ignore or deny the problem are only pushing off the responsibility of coming up with a solution from the current generation to future generations. Overall while peak oil signifies many terrible things to come some good can also come from it, if we use it as a motivation to make all our actions more sustainable before it is too late then we will have gained some very valuable information and hopefully learnt from our past mistakes.