

I went to Scotland last week. It was my first ever visit to the New Zealand of the North – despite being based in and around London for three years about three decades ago, I never made it as far as the land beyond Hadrian's Wall.

The reason for my trip was to attend the SPE (Society of Petroleum Engineers) Offshore Europe Conference and Expo, in the company of my cousin Isabelle, who hails from Dunedin but lives in Belgium.

Actually it's a longer story than that, and she originally hails from Belgium and is now back there, but Dunners is her spiritual home, and was her actual home for a very long time.

But I digress.

Izzy has worked in the wind power industry for about ten years, and although the SPE Expo was mostly focused on oil and gas, there was also a sizeable wind element present.

When I say sizeable I actually mean tiny; but that's a relative term. Allow me to explain. It was tiny by comparison with the oil and gas industries who were there, but huge in comparison with anything I've seen in lil' old New Zealand.

I actually had a Road to Damascus moment, very shortly after setting foot in the Expo. My flight from Luton to Aberdeen got in several hours ahead of my cuzzy's scheduled arrival, so I went ahead to have a look see.

Now – I've been to more Trade Shows than I could count, over the years. A&P Shows, Feilddays, industry-specific showcase events; somewhere quite literally up in three figures, and across the range of sectors that I have worked and been involved in. Wine, viticulture, horticulture, agriculture generally, tractors and farm machinery, trucks, firearms, honey, you name it, as a salesman and as an MP, as a customer and a seller.

I thought I had a handle on what they were about.

Oh boy. No, I was wrong. In fact I had no idea.

The thing that struck me, first and hardest, was the sheer scale of the event. It was massive. Vast. Huge. Really, really big.

By that I mean – imagine Mystery Creek, but all under one roof. I'm not exaggerating. And then imagine learning, and having the enormity of that realization dawn on you, that you're only in the first – and smallest – of three such Trade Halls.

Izzy had told me that the Offshore Europe event was touted as the biggest energy Trade Show in Europe, but that in fact it isn't. She's just come back from another one, in Germany, that has five display halls to Aberdeen's three, all of them bigger again. Apparently it's standard practice for the organisers of such shindigs to claim biggest, best, brightest, etc. Fancy that. You wouldn't catch anyone in sales or politics making such unsubstantiated claims, I'm sure.

Nothing about the place was remotely amateurish, either. Or cheap. The stands were lavish, professional, and sharp. No pull-up signs or blu-tacked coreflute here; no, eight-foot touch screens and fully-fitted, interior-designed, presentation suites were the standard. Apparently they can cost attendees anywhere up to a couple of hundred thousand Euros for the space alone, and as much as that again by the time they've furnished and staffed them, and given lots of goodies away. Giveaway goodies included such cheap throwaway items as bottles of Single Malt Scotch – almost every stand had a daily prize draw based around the old business-card-in-the-jar trick.

But then this is the industry that supplies fuel and energy to 500 million people, and the industries that help them to do that.

Engineering, shipping, rig resupply companies, helicopter firms, health and safety gear, pipeline and valve suppliers (I was slightly more in my element with some of those); nuts and bolts and fire suppression systems suppliers, electronic controls and instruments, remotely operated underwater vehicles, semi-autonomous rescue boats, you name it.

The second thing that struck me was that oil isn't going away anytime soon, and not only that, but no-one in Europe appears particularly bothered about that. I've written about the first of these aspects before, but till last week I hadn't had a first-hand appreciation of the second.

These were industry folks, of course, and whilst everyone we spoke to was genuinely polite, and took an interest in our interest in a quirky thing like wind power, everyone was also very matter-of-fact about renewables being a necessary part of the overall mix – but for reasons of economics, rather than the environment.

One nearing-retirement-age chap we spoke to, an engineer, was showcasing a new type of seabed anchor that his firm has designed for use with offshore wind turbines.

“The demand curve for oil is a straight line,” he told us. “It has been for fifty years, and it will be for another fifty.”

And he’s right. World oil consumption in 2008 was 85 million barrels per day. In 2016 it was 95 million barrels per day. Before 2030 ticks over, it will be 110 million barrels per day. 90 million new motor vehicles are manufactured globally every year, and fewer than 1% of them are electric.

So no, oil isn’t going away. It can’t. There is literally nothing with which we can currently replace the sheer quantum of energy that it supplies to our world.

There are things that we can and should be doing, of course, and wind and solar are among them. But the money being invested in those things comes from the same sources that are still investing money – staggeringly vast amounts of it – into new exploration and production of oil and gas. Realisation number three then followed – renewables have to stack up financially for the people who are currently heavily invested in oil, or they simply won’t happen, because oil is understood, everyone is set up for it, and it isn’t, and never was, running out.

You can know these things at an academic level, but it’s events like the SPE Expo that bring home the blunt reality of it, in terms of the money involved.

This doesn’t mean all roads lead to Environmental Doom, or that we should hang up our windmills and our solar panels and go home. The Stone Age didn’t come to an end because the world ran out of stone. The same goes for the Steam, and Bronze, and Iron Ages.

Something better will come along, eventually, and replace petroleum as the primary source for motor fuels. When that happens, there will still be plenty of oil left – which is good, because we can carry on using it for all sorts of other stuff.

So if it sounds at this point like I’m trying to talk myself out of getting involved in wind power, don’t fret; I’m not, but I am coming around to a slightly different way of thinking about it.

And presto chango, hard on the heels of the very Expo I was at, comes an announcement that the British Government is backing a US\$15-billion plan to use giant floating wind turbines out at sea, to produce hydrogen from seawater, which can then be pumped back to shore to provide fuel for domestic heating.

The idea is that a 4GW floating wind farm will be able to produce enough hydrogen to replace the use of natural gas in 1.5 million homes.

The tech that goes into making hydrogen out of water is not yet economically competitive with the tech that makes hydrogen out of hydrocarbons, but the number-crunchers are confident that it will be there in time for the planned kick-off in 2030. Part of the plan is to repurpose an old oil pipeline, no longer needed, in order to feed the hydrogen back to land under pressure.

But it will be the same people who currently supply the support services to the oil and gas industry, who will be supplying that support to this new wind-powered hydrogen industry.

And just as the manufacture of electric cars requires the same industrial infrastructure as internal combustion vehicles – glass, rubber, plastic, paint, electronics, electric motors, cabling, power mirrors, etc etc etc (down to and including tarmac roads, which are of course made out of oil) – so these new green industries will rely on the same availability in terms of engineering, design, construction, and maintenance, as is currently utilized by the rigs and the refineries.

Concrete, steel, diesel, and carbon fibre. Ships and planes and helicopters and pipelines, valves and control systems, deepwater rigs, technicians and pilots and cooks, the list goes on. I think we will make more progress towards cleaner energy becoming a more major part of the total supply, by getting away from the idea that anything and everything related to the production of oil and gas is necessarily all bad. In many if not most regards, it's going to be the same, and it isn't able to be replaced by anything.

And out at sea is where the development and expansion of wind power will continue to be focused, because out at sea is where the wind is strongest and most reliable. I'm picking that onshore wind will begin to trend more in the direction of large numbers of small turbines, say on every house and commercial building, and away from the present small number of very large turbines, that depend on massive infrastructures including roads and big transmission grids, and that also continue to run foul of environmental concerns such as noise pollution, bird deaths, and the fact that no-one particularly likes looking at them.

Out at sea is out of sight, and of course big anchors and big transmission lines can only be justified where there are big generators, making big parcels of saleable electricity, at predictably reliable percentages on the demand curve.

Very large-scale distribution of smaller wind-harvesting machinery, spread across entire territories, can utilize existing smaller structures and access roads, such as the house you live in and the street outside, as well as tapping straight into the downstream part of the grid that is the wire connecting your house or office building to it.

And of course smaller turbines are more easily made in the form of designs that don't kill so many endangered birds. Contributions made by having a one- or two-kilowatt turbine on the roof of every house with an electric car parked outside it, is a far more easily achievable, and actually environmentally useful proposition, than a street full of sparky cars all plugged into the coal-fired power station in the next county. Or the next country, come to that.

In conclusion I can say that I came away from this oil and gas extravaganza feeling more confident about wind and other renewables, not less. But I'm also more certain that we have to be smarter about how we approach them, and perhaps be a little less hung up on the search for a magic wand where green energy is concerned – because there probably isn't one.

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