



# Bubble blower

So much money is pouring into green projects that market collapse is a risk, warns a UK financier. **by LINDA SANDERS**

**L**ondon investment banker Per Wimmer is not your normal City suit. He has three masters degrees, has skydived over Mt Everest and aims to be the first fare-paying Dane in space.

Wimmer has also worked on a wide range of energy projects including wind, solar, waste-to-energy,

nuclear, wave, tidal, biomass and the more usual hydro, oil, gas and coal generation.

Having cut his teeth writing a book on the global financial crisis, observed from Wall Street, his latest offering is *The Green Bubble*. Its central premise is that we're facing an economic crash in renewable energy, partly spurred by the billions of dollars governments have spent on subsidies.

"Today, if it's green, it's okay. We'll promote it, subsidise it, legislate for it, lend to it and invest in it. Since it's for the ultimate benefit of the planet, it is good for us – the bank, the government, etc – to be seen doing it and somehow demands less critical scrutiny than other non-green projects," says Wimmer, who runs an investment bank, Wimmer Financial, alongside a

private investment company.

A big chunk of the green energy industry has become dependent on subsidies, which have created a substantial financial bubble reminiscent of the dotcom boom and past periods of extreme housing-price inflation, he says.

Venture capital has followed the subsidies, as investors see the sector as a safe haven. Although Wimmer knows clean energy is needed to avoid environmental disaster and to meet the world's energy demands, he says government support encourages investment in projects that will never be profitable.

Wimmer doesn't deny subsidies are often needed during a transition. "But truly sustainable energy is also financially and commercially sustainable. Within three to five years it needs to bear its own costs."

He worries what will happen to highly indebted projects when interest rates rise or politicians decide to reduce subsidies. He gives examples of projects – mostly in wind and solar – that have crashed and burnt, including some owned by industry leaders, such as Siemens and Bosch.

### TAKING OFF THE GREEN-TINTED SPECS

*The Green Bubble* compares the current enthusiasm for green energy to earlier manias that ended badly.

"During the internet bubble, if a venture was dotcom, part of the much-trumpeted 'new economy', it was okay. As long as a business could show it had a certain number of clicks per user, the usual valuation methods didn't apply."

In such a fevered market, green-investment naysayers risk being labelled self-serving champions of old, dirty technologies.

"If we take off our green-tinted spectacles, however, it quickly becomes clear that 'green' is not an unalloyed synonym for all that's wonderful. Green energy initiatives are fallible on at least two separate levels. One is in their sustainability as businesses, with or without various degrees of public support.

"The other is in their authenticity as truly green technologies – which is to say, carbon-free or at least carbon-light – and hence in their capacity to deliver real, sum-total reductions in emissions. If they can't deliver those, why are we spending all this money?

"Right now, green energy has another weakness, which is perhaps the one that should concern us most. Even if it was financially self-sustaining and totally



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emission-free, it can't be deployed on sufficient scale to supply as much energy as we need, as reliably as we need it, for many years to come."

Wimmer says his message is not anti-green but anti-waste – the waste of taxpayers' money.

He reckons most consumers and taxpayers are unaware of the amount going into supporting energy policies, often to relatively small effect. Germany, for example – not famous for its sunshine – spent NZ\$54.5 billion in tariffs to expand solar to 0.6% of its electricity generation, according

# The nuclear option

## Nuclear power might have no future in New Zealand but it could elsewhere in the world.

**Y**ou can't go past nuclear power as the solution to the world's burgeoning energy needs, according to Per Wimmer.

He acknowledges it's not an option for earthquake-prone countries such as ours (witness Fukushima) but argues nuclear is safer and greener than most other options. He agrees New Zealand is blessed to have so much hydro power – although building new plants these days would be an environmental challenge.

With the world's population forecast to rise from seven billion to more than nine billion by 2050, mostly in India and Africa, the International Energy Agency says world energy consumption will rise 40%, from 12 billion tonnes of oil equivalent (btoe) in 2009 to nearly 17btoe in 2035.

"Only gas and nuclear can deliver affordably and in volume for the time being," says Wimmer. "Gas may not be emission-free but it is considerably cleaner than coal. New supplies of shale gas, together with copious quantities of liquefied national gas from Qatar and offshore Australia, will keep a lid on prices."

Wimmer acknowledges nuclear power has gone from being the saviour to the pariah of the energy world, noting Germany has ordered coal-fired power stations so nuclear plants can be shut down.

Nuclear plants are expensive and time-consuming to build but have low running costs and greenhouse gas emissions. According to the Intergovernmental Panel on Climate Change, "Nuclear energy could make an increasing contribution to low-carbon energy supply, but a

variety of barriers and risks exist."

The European Commission estimates nuclear is the safest electricity generation technology, measured in annual deaths per gigawatt. Oil is the deadliest, followed by coal, largely reflecting fatalities in mining and exploration.

**W**immer quotes environmentalist James Lovelock, now a nuclear power advocate, who says: "We must stop fretting over the minute statistical risks of cancer from chemicals or radiation. Even if they were right about its dangers, and they are not, its worldwide use ... would pose an insignificant threat compared with ... lethal heat waves and sea levels rising to drown every coastal city of the world."

Although the need to store nuclear waste safely and for a very long time is one of the technology's downsides, Wimmer says a change in fuel from uranium to thorium would partly address both disposal and the weapons issues.

What of other energy sources?

Wind and sunshine are unreliable, needing backup from other – mostly fossil-based, for now – sources. Coal can give non-stop bulk supply and is cheap, but it's too dirty.

Hydroelectric power comes close to being the perfect energy option. Although costly to build, the unit cost of electricity over a plant's life can be among the lowest of all. It is clean and can be turned on and off at a moment's notice.

Hydro plants can store electricity in bulk, but require big rivers. Droughts can be a problem and big dams can only be built in certain topographies. Hydro schemes also disrupt communities in their path.

to a Ruhr University report. In 2012 an energy professor at the Technical University of Berlin estimated renewable subsidies would cost German consumers NZ\$467 billion between now and 2030.

Ecologist John Etherington estimates that over the 25-year life of a British onshore wind farm, it will get subsidies of NZ\$7 million per installed megawatt. That is in contrast to an initial turbine cost of about NZ\$2.5 million a megawatt, thus doubling the wholesale price of electricity.

### ON BORROWED MONEY

Because green energy projects are usually highly geared, Wimmer says they are more of a high-wire act.

"The exalted levels of debt ratchet up returns if things go well, but increase the scope for disaster if they do not. The scale of the debt involved means that if a number of large projects all failed at more or less the same time, we could have another financial crisis on our hands."

Finances aren't the only problem. "Even if they produced power economically without subsidy, day and night, without interruption, there simply isn't enough space for the power farms that would be needed unless everyone wants to live underneath a wind turbine."

David MacKay, former chief scientific adviser at the UK's Department of Energy and Climate Change, reckons even if the windiest 10% of Britain was covered in wind turbines, they would produce less than a sixth of the UK's electricity needs.

Wimmer also questions the clean, green jobs claim. Researchers at Spain's King Juan Carlos University concluded every new green megawatt installed led to the loss, on average, of 5.28 jobs, by raising energy costs and driving electricity-intensive businesses, such as iron and steel, chemicals and cement producers, to countries where energy was cheaper.

Meanwhile, in the US, thanks to shale gas, prices are down and the nation now has a century's worth of exploitable gas. Citigroup forecasts the US will be self-sufficient in oil by 2017 and a substantial exporter by 2020, helping persuade industry to return to a re-industrialised America, create 3.5 million to 4.5 million new jobs by 2020 and reduce the trade deficit by 56%. ■

*Wimmer Financial is London broker for Chatham Rock Phosphate, of which Linda Sanders is a director.*

