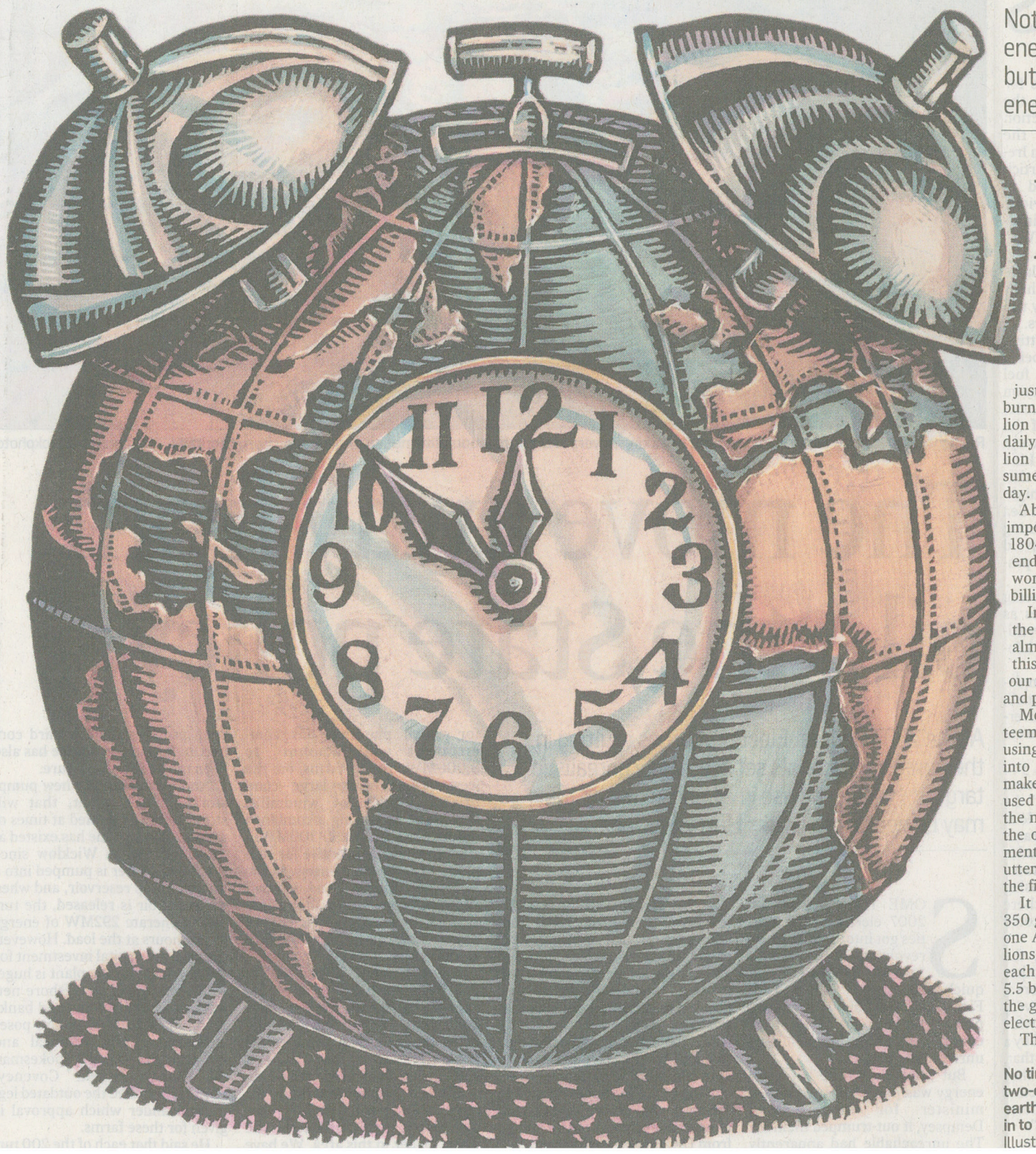
A SPECIAL REPORT

Global Energy

Time running out for old world resources



Not only must we accelerate the separation of energy and CO_2 emissions from economic growth, but Ireland itself should be working towards energy independence, writes **John Gibbons**

IMAGINE THE world's most colossal man-made structure, one square kilometre in area, 4.5km in height – 75 times taller than Dublin's Liberty Hall. Imagine that this building grows taller at the rate of seven or eight floors every 12 months. Then fill it with oil.

Now you have a picture of just how much of the stuff we burn every year. Twenty-nine billion barrels, to be precise. On a daily basis, that's around 82 million barrels. Ireland alone consumes nearly 200,000 of these a day.

Abundant oil has made the impossible possible. It took until 1804 – 100 centuries from the end of the last Ice Age – for the world's population to reach one billion.

In the 200 years since then, the earth's population has grown almost sevenfold. And fuelling this mind-boggling expansion in our numbers was cheap, powerful and plentiful oil.

Modern agriculture feeds the teeming billions by essentially using the soil to turn oil and gas into food. Natural gas is used to make fertilisers, while oil is heavily used for farm machinery as well as the manufacture of pesticides and the operation of irrigation equipment. Plus, of course, we depend utterly on oil to get products from the field to our shopping trolleys.

It takes the equivalent of 350 gallons of oil a year to feed one American. Apart from the billions of barrels of oil we consume each year, we also burn around 5.5 billion tonnes of coal annually, the great bulk of which is used for electricity production.

This vast fossil-powered inferno is slowly cooking our planet. Atmospheric levels of CO_2 – a potent greenhouse gas – are now at their highest in at least a million years, and perhaps a great deal longer. These levels are rising inexorably, year by year.

It takes a molecule of CO_2 upwards of a century to break down in the atmosphere, so the pollution from the oil we burned and the coal fires our parents lit 50 years ago are still heating our atmosphere today – and will continue to do so long into the future.

There is now "an urgent need to consider ways to accelerate the decoupling of energy and CO_2 emissions from economic growth", reports the International Energy Agency.

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Put in simple terms, if we continue on our current path of ever-increasing fossil fuel burning and spiralling emissions, we will, in the proximate future, irreversibly alter the climate on this planet in ways we can barely imagine.

The EU has decreed that under no circumstance can the planet's temperature be allowed to warm by more than two degrees versus pre-industrial levels. Beyond that point, and we will have entered a new climatic era on Earth – one unlike anything recorded in human history.

Right now, we are well on the way to two degrees. Already, global temperatures have risen by 0.8 degrees,, with an additional 0.7 degrees reckoned to be already "in the system" in the form of heating of the oceans that will, over the next century, continue to raise global temperatures.

We can say with some certainty that 1.5 degrees (of an absolute "safe" maximum of two degrees) is already unstoppable.

Business as usual – meaning that we continue to pursue economic growth by burning ever more fossil fuels – will most likely take us over the two-degree line within a couple of decades.

From that point, there will be no easy way back. All the international conferences, austerity measures and well-meaning expressions of concern cannot prevent a catastrophe after it has occurred. The only time available to head off this scenario is right now.

The other reason to reduce our consumption of fossil fuels is rather more mundane, albeit practical: we are running short of oil. Thierry Desmaret, chief executive of Total, said in 2006: "We say to governments, it's urgent to take action plans to reduce oil demand growth." Remember, this statement is not from Greenpeace, but from a senior oil industry figure.

Last year, about five million cars were sold in China alone. China is commissioning a new coal-fired power plant on average every five or six days. It is now on target to overtake the US as the world's biggest economy – and biggest polluter – in the coming years.

However, much of China's massive industrial output is packed straight into containers destined for Dublin port, Rotterdam, Houston, Texas and elsewhere in the Western world.

It is unfair to blame the Chinese for overproducing; the reality is that China is mostly doing the dirty work of producing cheap goods for our throwaway Western lifestyles. A Chinese person accounts for 3.1 tonnes of emissions, less than a fifth of the 17.5 tonnes for each person in Ireland.

One country that has demonstrated how consumption and emissions can be decoupled is Sweden. Despite their high standard of living, the average Swede produces seven tonnes of emissions – about 40 per cent of the Irish figure.

Drastic emissions cuts can be achieved, mainly via energy efficiency and conservation, if the political will is there.

Big business has long been seen as the enemy of conservation, with its focus on share values and the bottom line, combined with industry's tendency to let someone else pay for its pollution and emissions. We share a finite, fragile world, however, and we are only now beginning to fully fathom that what goes around, rapidly comes around.

Recently, the World Economic Forum (WEF), representing 100 of the world's largest businesses, issued a set of policy recommendations ahead of next month's G8 summit. "Nothing less than a rapid and fundamental strategy to reach a low-carbon world economy is needed," the WEF stated bluntly. "Emissions will have to fall very strongly in all countries by 2050 if we are to avoid dangerous climate change."

Ireland is one of the most oil-dependent countries in the OECD, and yet our western seaboard offers hundreds of rugged, wind-swept miles of coastline capable of being converted into one of the world's biggest wind and wave generators. Harnessing this potential would slash our CO_2 emissions and free us from our dependence on other countries for our energy security.

It could also allow us to become a net electricity exporter, via an interconnector, thus creating a vast, valuable, new "clean energy" sector.

And we could use our abundant electricity to power an extensive high-quality electrified public transport system.

The investment involved in achieving this goal of energy independence would be huge, and in a world of soaring oil prices and growing climate uncertainly, there can be no task more vital.

No time to waste – a mere two-degree increase in the earth's temperature will force us in to a new climatic era. Illustration: Getty Images

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