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A Crude Awakening

*The real reason for the economic crisis is the diminishing supply of oil and other fossil fuels. That's the conclusion of **Jeremy Rifkin**, President of the Foundation on Economic Trends and advisor to the European Union for the past decade. In the first of two exclusive interviews, he tells Criticaleye why industrial civilisation is at a dangerous crossroads*

A genuine move to sustainable energy could signal a paradigm shift in the economy. If the vision and will exists from governments and businesses, then mass employment could be created and markets revitalised as housing, transport and technology are reinvented to run on what's being described as a new global 'energy Internet'.

For Jeremy Rifkin, a Criticaleye Thought Leader and confidant of heads of state and global CEOs, green growth is no longer purely about combating climate change. Rather, it addresses the fundamental economic problems currently gripping the West as countries battle to regain financial stability.

The collapse of Lehman Brothers in September 2008 was seen as the catalyst for global recession and the so-called credit crunch. You beg to differ, suggesting the cause was earlier and goes deeper than avaricious bankers?

When the price of oil went over \$70 per barrel in mid-2007, the cost of products and services across the entire global supply chain began to rise as well, for the simple reason that virtually every commercial activity is dependent on oil and other fossil fuel energies. We grow our food in petrochemical fertilizers and pesticides. Most of our construction materials – cement, plastics and so on – are made of fossil fuels, as are the vast majority of pharmaceutical products. Our clothes, for the most part, are made from petrochemical synthetic fibres. Our transport, power and light are all reliant on fossil fuels as well.

So, as the price of oil rose, this created more pressure than the global supply chain could stand?

Come July 2008, Brent Crude hit \$147 a barrel and the price of basic items in stores shot up, gasoline and electricity prices soared, so did the price of construction materials, pharmaceutical products, and packaging materials – the list was endless. And people stopped purchasing. The entire economic engine of the second industrial revolution came to a stop. That, in effect, was the earthquake, while the collapse of the financial market, which occurred some sixty days later, was the aftershock.

Why is this happening now?

The reason we have hit the wall is that we have reached two milestones for the fossil fuel-based industrial age: 'peak oil per capita' and 'global peak oil production'. Global peak oil per capita was reached back in 1979. BP conducted a study, which has since been

New energy regimes annihilate time and space and bring more people together

confirmed by other studies, concluding that the available oil, if equally distributed, peaked in that year. While we've found more oil since then, the world population has grown much more quickly. If we were to distribute all of the known oil reserves today to the seven billion human beings living on earth, there would be less available per person.

The second milestone is global peak oil production, which is a term used among petro-geologists to denote the point when global oil production reaches its zenith on what is called the Hubbert Bell curve. Peak oil production occurs when half of the ultimately recoverable reserves are used up. The top of the curve represents the midpoint in oil recovery. The International Energy Agency, the authoritative global organisation that the world economy relies on for energy analysis and forecasting, dropped a bombshell in its 2011 global energy report stating that global peak crude oil production likely occurred in 2006. The long and short of it is that we are entering a long endgame for the second industrial revolution based on crude oil.

The emerging markets have increased the levels of demand too.

China and India have brought a third of the human race into the game. By 2007, India was growing by 9.6 per cent and China by 14.2 per cent and that huge aggregate of demand against the supply of crude oil pushed prices up.

Here is the bottom line. We are heading for a second collapse and these cycles are going to be every four years or less. Every time we try to rebuild the economy by replenishing inventory, oil prices go up, all the other prices go up and purchasing power shuts down.

But how does this endgame scenario link to the financial crisis? Surely it is too simplistic to blame sovereign and personal debt, for instance, on soaring commodity prices?

The second industrial revolution, by which I mean the coming together of centralised electricity, the oil era, the automobile and suburban construction and a mass consumer society, went through two stages of development. A juvenile infrastructure was laid down between 1900 and the beginning of the Great Depression in 1929. That remained in limbo until after World War II and then the passage of the US Interstate Highway Act of 1956 provided the impetus to mature the infrastructure for the auto age.

The establishment of an intercontinental highway grid, which at the time was heralded as the most ambitious and most expensive public works project in all of human history, created unparalleled economic expansion, making the US the most prosperous society on earth.

You believe this boom period was fuelled by the cheap and plentiful supply of oil?

Yes, along with the entire infrastructure that accompanied it. The credit bubble and financial crisis did not occur in a vacuum. They grew out of the deceleration of the second industrial revolution. That slowdown began in the late 1980s, when the suburban construction boom in the US, brought on by the laying down of the interstate highway system, peaked, signalling the high water mark of the auto age and oil era. It was the marriage of abundant, cheap oil and the automobile that drove the US to the top of the world economy by the 1980s. As that decade closed, America experienced a deep

recession brought on by the collapse of the commercial and residential housing markets that came with the completion of the rollout of the interstate highway system. In lieu of a powerful third industrial revolution, we came out of that recession in the early 1990s by dipping into the savings amassed during the expansion of the second industrial revolution. Unfortunately, we used up that accumulated wealth in less than half the time we took to create it in an extraordinary buying binge that kept the economic engine artificially revved up while the real economy was winding down.

This sounds incredibly US-centric.

It's not. We used the wealth we generated after World War II to continue to move the global economy along after the second industrial revolution peaked in America. After we had depleted our family savings and amassed record credit card debt, we entered the sub-prime mortgage Ponzi scheme which allowed us to refinance our homes over and over again, accruing even more debt. We then used the appreciated value of our homes to refinance our mortgages in order to secure additional cash to maintain our consumption spree. How does that relate to the rest of the world? Well, US purchasing power from 1990 to 2007 moved the European economy, the global economy, and especially the economy of developing nations. We all know that – it's incontrovertible.

And if that's not controversial, the question is: where did that purchasing power come from? The answer is that it came from living off the savings from the second industrial revolution that had already plateaued in the 80s and then we continued the buying spree by going deeply into consumer debt.

So the economic issues faced by individual countries are, in your view, part of this wider, systemic problem of diminishing fossil fuels?

There are countries with very specific problems like Greece, the UK or Ireland. But, if you look at the bigger picture, there is the big elephant called the US which really moved globalisation through its unprecedented purchasing power.

In other words, for you, the debate about say, the Euro or financial regulation, is to miss the point?

To place the blame on deregulated financial markets is not systemic thinking. Let's dig down and look at the systemic problems that emerge. To put it another

US purchasing power from 1990 to 2007 moved the global economy

way, imagine we fix the situation and impose austerity. In addition, we regulate the markets and we find ways to insure against recurring bubbles. Do you think these measures, by themselves, are going to allow us to regrow the global economy? I would really like to have a debate and ask folks about this – tell me, how are we going to be able to grow the global economy when oil continues to spike up to \$147 a barrel?

A new energy regime is required, then?

Our existing fossil fuel energies are getting more expensive and the technologies that employ those energies are increasingly ineffective. And the whole infrastructure we have established based on those fossil fuels is on life support. How do we grow a new global economy atop a dying second industrial revolution?

Countries will need to join together to find a solution.

We need a new economic vision and gameplan. We have to create a new energy and communication matrix that gives us a powerful economic multiplier effect for the 21st century, like the coming together of print technology with the coal power steam driven energies of the first industrial revolution and the merging of electricity communication—the telephone, radio and television—with the oil powered automobile, suburban construction and the mass-consumer society in the second industrial revolution of the 20th Century. Now we need a third industrial revolution which brings together another communication and energy matrix for the 21st Century.

What role do businesses have to play?

The question to ask is: where does your company want to be ten years from now? Show long-term investors where you really want to be. Do you want to be in the sunset energies, technologies

and infrastructure of the second industrial revolution, or do you want to be in the sunrise energies, technologies and infrastructure of an emerging third industrial revolution?

For you, this has to be the future?

The real economic game changers are when new communication revolutions merge with new energy regimes. They make possible new concepts of civilisation. New energy regimes annihilate time and space and bring more people together, differentiate skills and then integrate them into more complex economic and social units. The communication revolutions, in turn, manage the complexity of new energy regimes.

This will take years to achieve.

I'm 66 and I've seen it all, and this is really difficult. Over the next 20 years, the global economy will move in short cycles of growth and collapse, growth and collapse, and the key is that we have to keep the system alive on life support.

But in the meantime we have to think about where to go beyond that.

In the second interview with Criticaleye, Jeremy will discuss his economic vision for long-term recovery as described in his new book, ['The Third Industrial Revolution: How Lateral Power Is Transforming Energy, the Economy, and the World'](#)

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Jeremy's books have been translated into more than thirty languages and are used in thousands of universities, corporations and government agencies around the world.

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