Plan today for energy surprises tomorrow

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The world is at a crossroads. All signposts are written in the language of energy. Up to now, fossil fuels have powered civilisation, and remain the only reason humans are able to infest the planet with a population of 6 billion and a profligate lifestyle.

What's this got to do with forestry? Like city planners in early Pompeii, sellers of return tickets for the Titanic, or pre-9/11window-cleaners at the World Trade Center, our immediate hassles are overshadowed by more important external events. Cheap energy is the reason why logs from a sand dune in Santoft can end up on a sundeck in San Diego. Wood substitutes, like aluminium, are only imaginable in a world of abundant energy. There was a time when Emperor Napoleon III served his honoured guest, the King of Siam, on aluminium plates and cutlery – lesser mortals had to make do with gold.

Consider four major scenarios for the State of the World over the next few years.

Scenario One – Optimistic

The world population continues to climb until it levels off at about 8 or 9 billion, each middle-class Chinese gets a car, Americans get more holidays (five weeks instead of the current two), the North Atlantic fishing fleet goes to sea once more, the Aral Sea actually becomes a sea again, and we generally learn how to cherish this planet on which we are marooned. Renewable energies – including solar, wind and hydro power – proliferate, and biofuels become crucial for energy storage. Cars, trucks and aeroplanes run on hydrogen. Forestry is enthusiastically acknowledged as an environment-friendly, sustainable source of energy and materials.

Scenario Two – Peak Oil

Search for "Peak Oil" on the Internet and see what turns up. It will turn your hair white, or – if it's already white – make it fall out. With the world's oil and gas wells pumping at full capacity, demand for oil exceeds supply by 2010, and the price goes through the roof. Substitutes – such as tar sands, oil shales and coal-into-oil – are expensive and even worse Greenhouse polluters than oil. We come to realise, as the world enters a new Dark Ages, that twentieth-century economic growth was an ephemeral aberration.

Scenario Three – Global Warming

Just as the natural background level of Greenhouse gases keeps us 33° warmer than we would otherwise be, so an increase in these gases will warm us further. Which is not to say there is no meaningful debate over the magnitude and timing of this warming. The Kyoto Protocol and its successors are doomed, because individual humans – let alone individual nations – are incapable of making harsh immediate sacrifices for an uncertain long-term common good. The "Peak Oil" scenario may seem to be an antidote to the "Global Warming" scenario, but this is not necessarily true. The world has thousands of years of coal, and for some countries – like China – coal is its major resource. The world continues to warm for centuries, causing ecological havoc unprecedented since the asteroid struck, 65 million years ago. Many countries eventually become too hot, too dry or too submerged to be inhabitable by humans.

Scenario Four – The Fourth Horseman

Sink a tanker in the Straits of Hormuz and deal a double-blow to the hated House of Saud and to the Western customers of oil. Sail an innocuous-looking fishing-vessel into New York harbour, with a suicidal nuclear or dirty bomb hidden below-deck. If the death of 3000 New Yorkers can cause so much global disruption in our over-dependent world, what of a more serious incident? Look at the labels in the supermarket and ponder on the origins of our current goods and services, compared to the locally sourced supplies of 50 years ago. Trade and travel have made the West wealthy but also very, very vulnerable.

So which of these four scenarios will actually happen? Let us hope only the first. But real life is astonishingly complex, and an amalgam of all four is more probable, together with umpteen other scenarios not considered here. One scenario, however, is not likely. That is the business-as-usual, steady-as-she-goes, look back at the last few years and extrapolate the trend scenario. In the time it takes to grow a tree, discontinuities and disruptions are the norm, not the exception. In the last century – one standard rotation of European oaks – we had two world wars and one great depression. The world changed from horses, steamships and telegrams, to cars, planes and the Internet.

By all means, plant trees for the future. For profit and for the environment. But let's take Net Present Values and long-term global forecasts of timber supply and demand with all the salt in what was once the Aral Sea... .

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