Take a Western world struggling to escape from recession and high unemployment. Add an industry which is growing rapidly but absorbing an increasing amount of government support. Sprinkle on some cut-price competition from an emerging economy, and what do you get?

In our forecasts at the start of the year, we identified protectionism as one of the key risks for the clean energy sector in 2010. And sure enough we are hearing a growing chorus of complaints around the world about unfair trade.

In Germany, solar manufacturers have been restive for more than a year about the way the country’s expensive feed-in tariff is benefitting makers of Chinese cells and modules.

In the US, New York Senator Charles Schumer has been complaining for almost as long about the way grants from the country’s 2009 economic stimulus package are benefitting non-US companies, both manufacturers and developers. Particularly sensitive has been a 600MW wind project in Texas whose developers are intending to use turbines made by A-Power Generation Systems of China.

In Ontario, the administration’s Green Energy Act states that in order to qualify for Ontario’s generous feed-in tariffs, developers must ensure local goods and services make up 50% of the total costs of projects, rising to 60% in 2011.

Now, however, it looks like some of these rumbling complaints are taking a more serious turn.

On 13 September, Japan made a complaint to the World Trade Organization about Ontario’s local content policy. And the same month the United Steelworkers (USW) union in the US filed a 5,800-word submission with the US Trade Representative, citing “protectionist and predatory practices utilised by the Chinese to develop their green sector at the expense of production and job creation here in the US”.

The Obama administration has until 24 October – just eight days before the mid-term congressional elections - to decide whether or not to champion the case made by the USW. It will be looking for the answers to some difficult questions. How strong a case do the complainants have? Is it appropriate to use weapons from the protectionist’s arsenal during the industry’s infancy and adolescence? What effect would a descent into tit-for-tat protectionist measures have on the sector?

The USW petition alleges that China is guilty of five “illegal activities” – restrictions on access to critical materials; performance requirements for investors; discrimination against foreign firms and goods; prohibited export subsidies and prohibited domestic content subsidies; and trade-distorting domestic subsidies.

China has certainly done more than any other country to try to capture the clean energy value chain. It started by creating demand, adopting its first renewable energy law in 2005 and ensuring that its domestic utilities captured the bulk of the resultant projects. It supplemented this with a raft of industrial policy measures to support the development of its supplier base – cheap loans, tariffs on imported wind turbines, aggressive domestic content rules and so on. Nothing so unusual there – even developed countries which profess allegiance to free trade, don’t practise unconditionally what they preach.

Recently, however, things appear to have stepped up a gear. So far this year, the China Development Bank has provided $27bn of loans to its solar and wind manufacturers, at a discount to prevailing interest rates. Chinese wind turbine manufacturers may not have landed big contracts in Europe or the US yet, but they are most certainly starting to compete in the merging markets of Latin America, Turkey, Africa and the rest of Asia – armed with export trade credits the West is hard-pressed to match.

The imposition of export restrictions on rare earth minerals – essential for so many clean energy technologies, and with over 90% of supply coming out of China – is particularly threatening to the rest of the world’s industry.

So the complaints of protectionism appear to have some justification. But would it be wise to take dramatic action?

A clean energy trade war would certainly put the brakes on China’s headlong drive into the sector. Its PV manufacturers would lose access to their most significant markets. Its wind turbine makers would have to give up all hopes of selling in Europe and the US – hopes which underpin several
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US-made turbines were the only ones with access to the US market, and European turbines in Europe, domestic manufacturers would demand higher prices. The single most pressing issue for the industry is to drive down the cost of clean energy, relentlessly and over a sustained period. This is as true for wind as it is for solar as it is for bioenergy, and anything which interferes with this process is to be deplored.

Higher clean energy costs would make international agreement on emission reductions much more difficult than it already is. For developed countries to meet 2020 targets for renewable energy use and emission reductions, they are going to need all the cheap turbines and solar modules they can get their hands on. The higher the costs of switching, the harder it is for Western politicians to persuade their voters of the need to shift to a low-carbon economy.

Meanwhile Beijing, denied access to global markets, would no doubt reassess its huge investment in wind and solar. It could well decide that its commitment to reducing its economy’s carbon intensity must be pushed further down the agenda and even greater priority given to old-fashioned, coal-fuelled industrial development. It is an ugly scenario.

In any case, the skirmishes between the US and China over clean energy equipment are a sideshow compared to the much bigger question of exchange rates.

China’s foreign exchange reserves reached $2.45 trillion by the summer of 2010, up from $165bn just a decade earlier, driven in large part by official dollar purchases. With the risk of imminent financial meltdown apparently receding, US Treasury Secretary Tim Geithner has returned to his favourite topic, the undervaluation of China’s yuan, making increasingly strident statements on the matter.

Were the yuan to be allowed to float up to its purchase-power-parity rate of between four and five to the dollar, rather than 6.75, its solar cells and turbines would not seem so cheap. The clean energy industry would do well to avoid getting into a sector-specific trade war, and should instead push aggressively for the liberalisation of trade and exchange rates, and for aggressive, but fair competition.

At the Bloomberg New Energy Finance Summit in London in March, Vestas put forward its vision for a “Sustainable Energy Free Trade Area” (SEFTA) to ensure the most competitive worldwide market for clean energy products, services and commodities. Eliminate subsidies. Eliminate tariffs. Agree technological standards.

Now there’s a battle-cry worth heeding.