

Ensuring Survival

Business Models in a Low-Carbon World



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Introduction

Much to everybody's surprise the low-carbon bandwagon survived even a global downturn – it remains a real issue in the eyes of politicians and the public alike.

The global economic downturn has – somewhat unexpectedly – marked the end of an era. We have not, of course, seen the end of risky financial decisions (because risk and reward will always go hand in hand). What we have reached is the end of a period when carbon became established as an issue but action appeared optional for individual governments, businesses and societies.

Governments across the globe have, at different rates and with different agendas, gradually taken up the fight to stabilize atmospheric greenhouse gases at levels low enough to avoid the most dangerous impacts of climate change. The recent recession could have slowed down efforts to achieve this outcome. Instead, it appears to have acted as a catalyst for radical change towards a less carbon-intensive world.

Take China, for instance. While the global economic downturn has hurt the nation's exports of renewable and low carbon technologies, it has created new impetus to expand domestic markets. Internationally, mainland China supplies 30% of the world's solar photovoltaic technology, and is the fourth largest wind power generator in the world. Within an incredibly short space of time, China has taken the lead in the global race to develop and commercialize a range of low-carbon technologies. Nor does one have to look far for the reasons for this, with nearly 35% of China's massive recent fiscal stimulus being directed at promotion of the green economy.

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The End of the Beginning

Do you have any competitors who are using the recession to re-shape their business to exploit a carbon-constrained world?

Over the last few years, some companies made progress towards more sustainable ways of doing business – ways that reflected a business critical need to respond to the challenge of operating within environmental limits. Others have taken this further and, as stated in the recent HSBC study, “businesses selling low-carbon goods and services now generate more revenue than the aero space and defense sectors combined”¹. There remain, however, many companies that continue to see action (or even thinking about action) as something that can be deferred.

We have now reached a point where it is already getting late in the day for those companies to develop a sustainable response to climate change. In many cases action may not yet have been taken because of a fond belief that a carbon-constrained world is something that will only affect others. In reality, the carbon agenda will leave no business untouched, through multiple direct and indirect routes – from brand recognition, to the cost-base, to investor perceptions of value.

For responses to be effective, the time has come for a fresh appraisal of what sustainable business actually means. One that goes well beyond so-called “environmental friendliness”

In this publication, we present four assertions that we believe highlight the dangers of complacency:

- Assertion 1 – Carbon is an unstoppable steamroller. There is too much political momentum, irrespective of the science, for this to go away now. It might not go as fast as the enthusiasts would wish – but it will be fast enough to be painful for the unprepared.
- Assertion 2 – Carbon is a real cost which, however well hidden, will affect you – Organisations are used to looking at their cost base and their supply chain. What is unusual here is the variety of ways that an increasing cost of carbon will bite.
- Assertion 3 – Investors will see companies in a very different light – While it is still all about risk and reward, the sources of risk (and reward) will change.
- Assertion 4 – Now is the right time to consider a far-reaching response. Once you have a clear map of all the implications arising from a low-carbon economy, it will then be possible to map this onto key elements of your business model.

¹Source: Financial Times 17th September 2009

Does your Business Model stand up to a Carbon-Constrained World?

For many years we have been advising senior executives on how to take a more holistic approach to business – one that embraces a broader spectrum of externalities and business risks.

In recent publications we have highlighted strong 21st century trends accelerating the need for this holistic view. For example, in ‘Carbon Futures’ we pointed out that emissions trading “will become a key part of government strategies to combat climate change, in combination with complementary measures such as efficiency standards, technology solutions, and tariffs.”

More recently, ‘The Beginning of the End for Oil?’ highlighted three mutually reinforcing policy drivers that are strongly converging right now: the political undesirability of extreme price volatility; security of energy supply; and climate change. These are undermining some fundamental assumptions about the nature of the global energy system and its businesses, when the world re-emerges from the current economic downturn.

Businesses also need to consider how they engage with public policy; not all companies will need or chose actively to engage in the policy debate, but all will as a minimum need to be aware of the debate and reflecting on what it means for their business model. This is explored in ‘Optimising involvement in Public Policy’.

All businesses will be affected by these trends in some sense, although to varying degrees and with different timescales. Potentially rapid changes will take place in how companies are viewed by their stakeholders, how investors and markets value them, and how competitors respond to the same pressures. This is particularly poignant in a world where “business as usual” projections for increased energy demand have been confirmed as unsustainable on every side².

Meanwhile, additional pressures are transforming the landscape for business – not necessarily directly, but still strongly, because they can lead to social and international concern and unrest. Water security, migration, urbanization, and food security are among the foremost of these.

“There is no denying that the goalposts for business are moving. Only those who consider the whole picture will get it – otherwise it will be too easy to be blindsided.”

² For example, by the International Energy Agency, the United Nations Economic Commission for Europe, the International Monetary Fund, and the China Sustainable Energy Program.

Deeper Understanding and Awareness of Indirect Impacts

Even die-hard “business is our business” executives will have no choice but to deal with the indirect – but ever stronger – impacts of carbon policies on their supply chains, within their procurement strategies or their distribution and logistics networks, as well as those that directly affect their manufacturing or service operations.

Companies need to focus on aspects of sustainability that are material to their business. And to stop getting distracted, or distracting their stakeholders, with those that aren’t.

Sustainability is not a PR exercise. Its proper place is at the core of the business model. It’s about managing risk and reward, not image.

“Companies need to focus on aspects of sustainability that are material to their business. And to stop getting distracted, or distracting their stakeholders, with those that aren’t.”

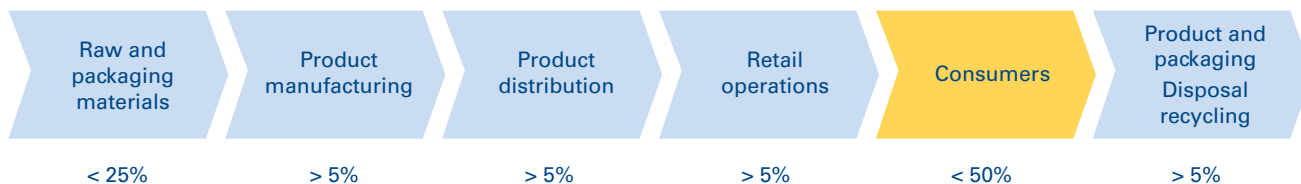
Case study 1

In the consumer goods sector, Reckitt Benckiser launched its Carbon 20 initiative in November 2007 to reduce its products’ total carbon footprint by 20% by 2020. The company found that almost two-thirds of that carbon footprint came from product consumption by its customers. As well as offering lower carbon products, Reckitt Benckiser has an ongoing programme of educating and enabling consumers to reduce their energy and water consumption in the home when they’re using its products (see figure 1).

Case study 2

The Ensus Group is tackling major concerns about the production of biofuels – in particular, food prices and food security – by co-producing animal feed in its production process in Europe’s largest wheat refinery. The 350 thousand tonnes of high-protein animal feed produced by the plant will reduce European demand for soy meal imports, which contribute to high levels of deforestation in South America.

Figure 1. Contribution to total carbon footprint in supply chain



Source: Modified from Reckitt Benckiser

Focus in an Uncertain World

Recently, the need has become ever more apparent for businesses to focus more on understanding the current public policy process, the significance and potential outcomes of events such as the UN climate change conference in Copenhagen in December, developments in emissions trading and cap and trade systems, and market and stakeholder sentiment in relation to carbon, climate change and water.

As we look forward, we can make four key assertions about the near-term future, which will in turn shape the long term.

Examples of uncertainty

- Will developing countries have to cap their emissions post-2012?
- How much should developed nations increase their funding for developing countries to help them mitigate and adapt to climate change?
- What will be the impact of such decisions on businesses operating transnationally?
- How can carbon be monetised where most of the emissions occur during the product use? (e.g. aluminium used in the automotive sector as compared to steel).

Assertion 1 – Carbon is an unstoppable steamroller

Whereas the forthcoming United Nations meeting in Copenhagen is certainly an important event, a certain amount of realism seems in order as to what it will produce by way of agreed outcomes and actions – we would argue, however, that irrespective of whether it is deemed to be a success or a disappointment, it should be seen as a milestone rather than a destination. The reality is that the public policy process of which it is a part is now well established and will continue. There is too much political momentum, irrespective of the science, for this to go away now. It might not go as fast as the enthusiasts would wish – but it will be fast enough to be painful for the unprepared.

Drivers for this assertion

Leaders from around the world are aware of both the messages coming from climate change scientists and the demand for bold policy action from their constituencies. Leaders understand the importance of having a strong position at meetings such as the G8 and EU.

Attention to climate change is only going to intensify in coming years. Many companies are looking for stable regulatory frameworks which don't compromise competitiveness and are pushing governments to consolidate their position; non-governmental organisations are building on the traction gained to date; the media continues to respond to a key societal concern. These, among other drivers, act as a positive feedback process increasing the focus on climate change.

However, this steamroller plays out differently in developed versus developing countries. The latter – while concerned about climate change – are insistent that their continuing economic development and the associated improvement in the living standards of their people should not be compromised. Much will hinge on the positions taken by countries such as India and China, determined as they are to ensure that Western countries do not link trade with climate change issues. Having said that, and acknowledging that this is an understandable negotiating position, one should equally be under no illusions about the fact that, as mentioned earlier, China in particular is already acting decisively in this domain, not least because of the long-term commercial advantage that it thinks it will be able to generate.

“Many companies are looking for stable regulatory frameworks which don't compromise competitiveness and are pushing governments to consolidate their position.”

Focus in an Uncertain World

Options and imperatives

Irrespective of how far and how fast different governments are willing and able to go on climate change, there will be an asymmetrical distribution of opportunities and obstacles between countries. This will invariably place some competitors at an advantage:

Collaboration by governments – of which Copenhagen is a symbol but by no means the whole picture – will result in commitments over time. Competitors who figure out how to create an edge in their markets today could be powerfully positioned when collaboration eventually materialises.

One example - the predominance today of a company such as Vestas in the wind industry was driven by its having been able to grow a domestic market in Denmark and then having been able to extend internationally as incentives increased elsewhere.

We expect to see the rise of companies that grab opportunities and go global with them. Low-carbon living and business are creating opportunities for innovation in business models, technologies, products and services – and hence opportunities for business growth.

Companies in emerging markets able to demonstrate their role in meeting both economic growth and climate change priorities will be well placed to respond to key national initiatives. Furthermore, they may benefit from higher levels of financial assistance and technology transfers. Conversely, ignoring the green agenda could leave them badly exposed if western countries impose trade-linked penalties on those not meeting environmental standards.

Those companies that can find a competitive edge in a carbon-costly country or market should find themselves in great shape in emerging markets. This is analogous to the reason often given for the success of Japanese companies in Western markets, namely the intense competitiveness of their domestic market.

Companies therefore need to sharpen up or somebody who can manage carbon better will ride the steamroller.

Assertion 2 – Carbon is a real cost which, however well hidden, will affect you

The energy intensive industries are already seeing the impact of the cost of carbon. But gradually others will notice the impact – even if they think otherwise.

Factoring a market price for carbon into your business is going to prove as critical as factoring in royalties (e.g. if you're an oil company) or electricity costs (e.g. if you're a telecom provider). And this price is inevitably going to increase above current European levels, probably significantly so. Others will find numerous different (and indirect) ways in which carbon can affect their cost base and supply chain.

Drivers for this assertion

All the indicators – including, notably, current US actions in this area – are pointing towards the establishment of more cap and trade systems, with the market setting the price within the framework set by authorities. While the early years of trading saw some profiting from free allocation mechanisms, it is likely this will become increasingly rare, with more and more allowances set by auction.

Meanwhile, scientists continue to lower their estimates of what will constitute 'acceptable' emissions in the atmosphere to limit destructive climate change. So therefore expect the pressures on the price of carbon to continue. The scientists aren't going away any time soon.

In addition, more governments are making commitments to encourage low-carbon technology development; for instance in some markets there are already strong pressures to ensure new power generation projects are "capture ready" i.e. allowing future carbon capture and sequestration projects; while this signals the commitment of governments to this particular technology, what will move things from capture ready to capture implementation is a price on carbon which justifies the huge investments involved.

As carbon caps get tighter, then, and supply/demand market forces become stronger, the 'price of carbon' will naturally and inexorably rise.

Focus in an Uncertain World

Options and imperatives

The impact on heavy emitters will be significant; they know it and are starting to act; there are a number of reasons why low/zero emitters should consider acting too:

In some industries low emitters could be subject to targeted regulation which would impose product performance measures (e.g. managing standby power demand in consumer electronics equipment). This could raise costs for the manufacturer. Conversely; companies in the telecoms sector can benefit from increasing demand for remote working solutions.

All companies need to consider how their raw materials will be influenced by a cost of carbon; Brewers, for instance, will find costs of packaging, barley and other crops affected directly or through competition (e.g. for land used to harvest biofuels).

Companies which do not take this on board will reduce their competitiveness due to increased costs of operations, increased costs of materials and supply chain inefficiency. For some low-emitters – by the time these costs are on the radar – it is likely that the competition will have already pulled ahead.

Assertion 3 – Investors will see companies in a very different light

While it is still all about risk and reward, the sources of risk – and reward – will change. The leaders are identifying and managing carbon-risks (e.g. reducing the gram/km metrics in the automotive sector) and also positioning themselves for rewards beyond simple branding – such as developing products across a range of renewable energy technologies.

“For some low-emitters – by the time these costs are on the radar – it is likely that the competition will have already pulled ahead.”

Drivers for this assertion

The investment community has always included qualitative as well as quantitative indicators in its assessment of company value.

However, greater attention is being paid by investors to company activities that have environmental and social impacts which could potentially cause business disruption, loss of earnings, and/or brand or reputation damage. Carbon exposure is emerging strongly as a key risk indicator. This can be illustrated by the growth of interest in the Carbon Disclosure Project, which now includes investors representing funds of \$55 trillion, since its creation in 2003. Similarly, there is considerable interest in new indices such as the ECPI ‘Carbon Winners’ index which capture carbon exposure.

On the growth side of the valuation estimate, account must be taken of the financial penalties for failing to anticipate and position for the changes referred to above, especially given how predictable these changes now seem.

Combined with the more obvious financial impacts of a carbon price (which is very unlikely to be harmonized across all regions in the foreseeable future), these trends are likely to render the assessment and calculation of multinational company worth increasingly complex.

Options and imperatives

For any company’s top executives, charged with safeguarding and growing the value of the company, the implications of falling out of sync with market sentiment and priorities are considerable.

Decisions to invest in new projects or assets need to include explicit consideration of their CO₂ impact. Beyond this, the onus is on people at the top levels of the company to review their business models and assess their robustness in the current context. Where necessary, they will need to begin the process of adapting and renewing those models to reflect what the market is looking for; and to ensure that changes or new models are well communicated, both internally and externally.

Focus in an Uncertain World

It is clear that this involves going well beyond “green branding” – much of this activity, which has in many cases perhaps been more about PR than about substance, is now being overtaken by events, and even runs the risk of being seen as little more than a sophisticated form of ‘greenwashing’. This, in the context of today’s increasing awareness, could be more detrimental than doing nothing at all.

High-level decision makers also need to make sure the company does not miss out on important technology investment opportunities, and pursue strongly those with value-adding potential – e.g. through reducing the company’s carbon risk exposure, enhancing its carbon-adjusted brand, and/or improving the product offering for customers seeking to address their own carbon issues.

The market is an unforgiving place, and the consequences of ignoring how it is changing can be severe. There are numerous well-known examples of companies that have misread sentiment – such as the impact of genetically modified seeds on Monsanto or the management of Brent Spar by Shell – which even today have not been forgotten. While these companies have survived to tell the tale, others have not been so lucky, and there will undoubtedly be casualties from a failure to adapt to the new carbon world.

Assertion 4 – Now is the right time to consider a far-reaching response

If you have a clear understanding of all the implications arising from a low-carbon economy, it is then possible to map this onto key elements of your business model.

If you’re carbon-intensive, then the need for a low-carbon business model will be immediate and substantial.

If you’re not, then some enlightened paranoia might be a good idea. While incremental adaptation to change might be enough, you still need to follow the evolution of the climate change debate carefully – if only because your competitors may have spotted something and acted already.

Options and imperatives

Key material considerations in terms of strategy can be organised in terms of Porter’s five forces:

Companies need to consider how customers’ bargaining power will change in a low-carbon world. This includes ensuring they maintain customer loyalty through, for example, helping them navigate through the complex area of climate change. For example, the retailer Tesco is offering practical solutions to its customers in reducing their impact on the environment. In addition to its work in carbon labelling of products, it is focusing on providing low-cost environmentally-friendly products throughout its “Value” range.

Climate change has also emerged as a source of internal rivalry amongst existing competitors. However there are examples where companies have hedged their ‘bets’ across too many so-called ‘sustainability projects’, without a concerted strategic thought process embracing the whole business. This results in effort spread too thinly – especially where resources are in short supply. In turn this means that important elements will start dropping off the agenda, and returns on the investment will be poor. Conversely, in the electricity utility sector, leading companies have reduced emphasis on issues such as biodiversity enhancement, voluntary offsetting etc; instead they are focussing on achieving the critical balance between the price of electricity, security of supply and carbon intensity.

The threat of substitution is going to increase as climate change moves further up the agenda. This is in part stimulated by the requirement for enhanced environmental performance in new products and ongoing growth of investment in clean technologies. Despite the recession, revenues in the low-carbon sector soared by 75% in 2008, and what more, current trends show that the sector will exceed \$2,000bn by 2020³. Companies who are well positioned to respond will have a well thought out technology strategy and corresponding position across the value chain.

The well-known example of the demise of the US ice industry with the development of refrigeration taking out a whole supply chain could soon sound familiar to companies dependent on carbon intensive products and services.

³Source: Financial Times 17th September 2009

Focus in an Uncertain World

The balance of suppliers bargaining power, as the environmental performance of suppliers is affected under the low carbon world, impacts on the supply of materials. It has probably never been more important to “know your numbers” and know your customers: above all, you need to know the impact of passing on the costs of carbon measures to customers, especially in the face of competition from countries with different mechanisms in place.

Some companies are responding to this by understanding in detail the greenhouse gas emissions arising from their products, according to established standards (e.g. PAS 2050). However, care must be taken not to allow a narrow focus on measurement to obscure issues of greater strategic importance. Rather, the focus needs to remain on material issues – such as broader strategies for carbon emission reduction – in the endeavour properly to address climate change.

The threats of new entrants will put new pressures on incumbents in a low-carbon world. To respond, companies will need to ensure adaptability in their business models and organizations.

For instance, companies will have to integrate lifecycle thinking into their business models now; by considering externalities today, they can ensure that new entrants do not occupy the new markets created by emerging legislation.

Business models should also focus on the key environmental (and efficiency) requirements of their customers. Some companies have already started to do this very successfully.

“It has probably never been more important to know your numbers and know your customers.”

Case study 3

Motorola is one of the few companies demonstrating lifecycle thinking in mobile phones, with the launch of the world’s first carbon neutral mobile phone – MOTO W233 Renew – early in 2009. The new model is made partly out of recycled water bottles and is fully recyclable. The packaging size has been reduced by 22%, and materials inside the box are printed on 100% post-consumer recycled paper. The phone has a high talk time, thus allowing users to charge less and use less energy; standby battery life is 18 hours. When the user is finished with the phone, a postage-paid envelope in the box makes it easy and free to return the phone for recycling. Motorola, in an alliance with Carbonfund.org, also offsets the residual carbon emissions from manufacture, distribution and operation processes.

New entrants can also gain entry by exploiting some of the new markets created by climate change (e.g. using the Clean Development Mechanism). In many cases, companies are looking at new partnership models. For instance the joint venture Orbeo was established to exploit the access to carbon credits by a chemical company and a financial institution with expertise in carbon trading. This is akin to companies elsewhere adapting their business models – such as Amazon moving from a simple bookseller and becoming a broad marketplace.

Case study 4

Akzo Nobel, a Dutch multinational specializing in decorative paints, performance coatings and specialty chemicals, has positioned itself as a service company helping its customers to reduce their ecological footprints. Its eco-premium solutions help to improve the fuel efficiency of its clients from the marine and airline industries.

A lack of commitment to assess the need for change, and to make real changes as and when they are necessary, will inevitably leave the door to the marketplace open to new players.

Conclusion

The early, narrow view that a sustainable business is simply one that doesn't damage the environment has been losing currency for some years. More recently, sustainability has been interpreted as the ability to survive in business over a long period of time; but this too has shortcomings.

We argue that in a low-carbon world, a sustainable business is one that is able to keep growing – in that world the balance of industrial and political power is changing rapidly, the affairs and interests of policy, business and society are increasingly intertwined, and “business as usual” severely threatens the future of planet, people and profit alike.

So what do we need to think about?

A step change is coming in public policy; it may not be this year, but it will come. There is a clear need to separate the rhetoric from the genuine developments in this complex debate.

A cost of carbon will affect everyone – this will not be straight forward; and the key to competitive advantage will be to figure out how to, at least, minimise the impact of and, at best, exploit the increasing cost of carbon or the broader carbon agenda.

Opportunities and risks from an investor's perspective need to be considered - including taking indirect effects into account.

A step change may be needed in many companies' business strategies and business models covering the approach to technology, customers, supply chain etc.

But no-one can reasonably continue to put off thinking about what material impact these changes will have on their company and what their company's response should look like.

That thought process needs to start now, as others, aware that we are on the verge of radical change to our business environment, are not standing still.



On Thin Ice

We have now reached a point where it is nearly too late for companies to develop a sustainable response to climate change. In many cases action may not yet have been taken because of a fond belief that a carbon-constrained world is something that will only affect others. In reality, the carbon agenda will leave no business untouched, through multiple direct and indirect routes from brand recognition, to the cost-base, to investor perceptions of value.

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