PricewaterhouseCoopers Sustainability & Climate Change Services

Post-Copenhagen Analysis: Implications for Business

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So much has been written about the 'disappointment' or 'failure' of the Climate Summit in Copenhagen last month that rehashing the final eventful days and hours of COP-15 here would add little. But there has been much less analysis of the implications of the Copenhagen Accord for business. This is the focus of this paper.

Political commitment, but little clarity

Business had been pressing governments to send clear, long term signals about the pace and direction of climate policy. On any credible measure, the Accord does not do this. It reflects a broader coalition behind the intent to stay within 2 degrees Celsius of warming, but failed to deliver any specifics on national emissions targets or mitigation plans for either 2020 or 2050. Even on issues where progress appears to have been made, such as technology transfer or adaptation, the Accord lacks the detail required to prompt action.

Developed countries are expected to submit targets for 2020 to the UN by the end of January this year, whilst developing nations are encouraged to log mitigation actions by that date. These targets and plans would provide some granularity to the policy agenda. But it remains to be seen how many countries meet the deadline and whether the submissions reflect any greater ambition than the pledges made by politicians in the run up to Copenhagen. Even then, businesses looking for clarity will continue to face a period of uncertainty which will remain until those targets are enshrined in national legislation.

How (and when) should business respond

Business hasn't been waiting for the outcome of Copenhagen to take action on climate change. But even if it hasn't provided the clarity we sought, Copenhagen has reinforced a number of themes and trends which will require action by companies and their boards.

In the next five years, action on climate change will focus in the following areas:

- **Energy efficiency:** pressure on margins and cash flows has reinforced the need to manage down energy costs. Across the spectrum, from energy to retail, from chemicals to consumer products, companies are taking action to improve energy efficiency and reduce carbon emissions. It's simply a matter of good housekeeping. This will continue, prompted by higher energy costs and helped by technological innovation. Energy efficiency or fuel saving measures often have short payback periods (2-4 years). Access to capital isn't necessarily the key barrier to these actions; the challenge is in identifying projects which are competitive within a company's portfolio.
- **Regulation and standards:** Governments are expected to complement market measures with non-market regulations, such as stricter standards on fuel and energy efficiency in transport, appliances and homes, and to encourage more sustainable practices. Despite pressures to cut 'red tape' elsewhere, we expect to see an acceleration of low-carbon regulation and standards.
- **Carbon management:** Business is investing in carbon and energy management systems which are integrated in their operations and key performance indicators rather than being just an annual number crunching exercise. Ultimately this information should inform investment decisions and therefore needs to be readily available and reliable. For long term or strategic investments in infrastructure or energy projects (producing and consuming) companies need to understand the projects sensitivity to different policy, carbon price and climate scenarios.
- **Reporting:** The requirements for business to report credible or verified GHG data are increasing; even within the same jurisdiction a company may submit emissions data in

multiple formats for different purposes or regulations. Investing in a robust and flexible data management system will enable companies to meet these changing obligations.

- **Marketing:** Despite the huge press interest in climate change in the run up to Copenhagen, public interest and engagement in the issue has lost out to concern about the economy and jobs since the credit crunch in late 2008. As we come out of recession, we expect momentum to build behind climate change and carbon as consumer issues, encouraged by media coverage, corporate and product marketing and wider communication and education.
- **Carbon Markets:** Copenhagen hasn't given the boost to carbon markets that many had hoped for, but carbon pricing is probably here to stay. In the absence of a common (global) price for carbon, at least for the foreseeable future, companies will face uncertainty (and opportunity) in determining facility locations. The shadow price of carbon should cover a range of scenarios and vary for different national outcomes.
- **Taxation:** We also expect to see more action on carbon and green taxes, as evidenced by recent announcements of carbon taxes in Ireland and France and the revisions to the EU Energy Tax Directive currently out for consultation. It will take a while for changes to the tax system to filter through, but variations between territories will create complexity that business will need to prepare for.

Within the next few years, we expect to see increasingly persuasive, and increasingly worrying, scientific evidence of climate change and greater understanding of potential impacts. The Accord proposes a progress report in 2015 following the publication of the IPCC's Fifth Assessment Report in 2013 and 2014. We expect this to result in renewed urgency and a rapid scaling of regulatory and other responses.

This will determine whether the goal of 2 degrees Celsius still seems achievable, never mind the more ambitious 1.5 degrees referenced in the Accord. So it would be prudent for Chief Risk Officers or Risk Committees to consider the implications of 3 or even 4 degrees Celsius of warming, particularly where they have markets, long-lived assets or supply chains which are vulnerable to climate impacts (eg coastal regions, highly reliant on water availability or vulnerable to extreme weather events).

Climate policy in the US and the EU

In the US, there is probably a greater prospect of climate regulation now, whether from a bill in Congress or the EPA. Companies with significant activities in the US will want to monitor developments in Washington DC. Meanwhile, a sensible precautionary measure for US businesses would be to develop a better understanding of their GHG data and to start to quantify and cost the different measures available to reduce energy use and cut emissions.

In the EU, the move from a 20% reduction target to 30% would be hard to justify on the outcome of Copenhagen. Carbon prices in the EU Emissions Trading Scheme and more generally look set to remain relatively low until economic growth picks up or a more ambitious target is adopted. This will continue to delay investment in low carbon generation and other significant capital investments in reducing emissions.

Depending on progress with the US legislation and the scale of any new pledges from the major emerging economies, and in the absence of progress at the international level, we anticipate increasing pressure on governments in Europe and North America to introduce border tax adjustments to level the playing field for their sectors covered by carbon regulations. Alongside the introduction of their own carbon tax (which will be revised following a recent ruling that it is unconstitutional), the French have called for the implementation of border tax adjustments. It is likely that, as cap-and-trade schemes and/or carbon taxes become more prevalent around the world, so will border tax adjustments for goods.

Too early to write Copenhagen off as a failure

While many cheered at the adoption of the Kyoto Protocol in 1997, it wasn't until 2001 that the implications of the Protocol became clear (after George Bush declared that it was "fundamentally flawed" and the negotiations at COP-7 in Marrakech which operationalised many aspects of the Protocol). And there are far fewer cheering for the Kyoto Protocol now.

The criticism of Copenhagen was more immediate, with commentators and politicians condemning the Copenhagen Accord as a weak deal even while the conference was still in session. When asked his opinion of the outcome of the 1789 French Revolution, Zhou Enlai, Prime Minister of China in the early 1950's, is reputed to have replied: "It is too early to say". Perhaps it is also too early to judge Copenhagen.

For business, many of the issues due to be addressed at COP-15 are unresolved or have been postponed. How the process moves forward at the international and national levels will be critical:

- At best the international process serves as a catalyst to the development of national legislation. Once major developed and developing countries submit their targets and plans to the UN, they will need to implement policies and regulations to achieve them.
- The real litmus test for Copenhagen is whether it supports or impedes the passage of climate legislation in the US. Legislation to introduce an economy-wide cap-and-trade programme would be transformational shifting the centre of gravity of the carbon market from London to New York. But as Republican Congressman Jim Sensenbrenner said at COP-15, the bill "is not a done deal" and with mid-term elections at the end of the 2010, unless the legislation moves forward in the next six months, it could face extended delays.
- The Accord proposes a number of new mechanisms or institutions to promote technology transfer, to reduce emissions from deforestation and forest degradation (REDD), and to support adaptation and mitigation in developing countries (the Copenhagen Green Climate Fund). It remains to be seen whether these mechanisms will engage the private sector successfully, as is the situation with the Clean Development Mechanism, or not as is the case with Joint Implementation.
- Public-private financing, sectoral crediting mechanisms and the role of carbon markets all had a mention in the Accord, but there is little clarity over how they will be implemented. Countries did agree to improve the operation of the CDM. While this may promote better interaction between the CDM Executive Board and project developers, the status of the CDM post-2012 is still unclear. That uncertainty will remain until the next COP at least.
- The Copenhagen Accord also proposes a monitoring and verification regime to ensure that accounting for national targets (and financing) is robust and transparent. If this regime is implemented effectively, it could promote greater trust between countries and consequently more ambitious actions at the national level.

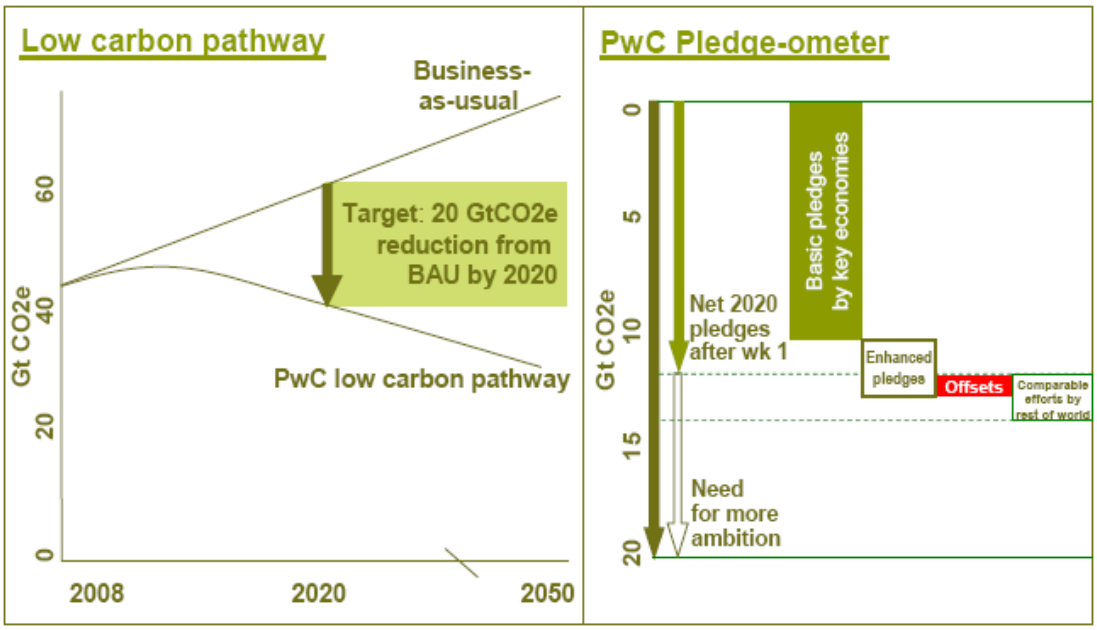
While it is too early to judge COP-15 a failure, it did not send a clear signal to businesses making strategic investments in clean technology, energy or energy-intensive projects, delaying long term investments in these sectors. Until many of the issues identified above are resolved, national and regional regulations will be the most important driver of low carbon investment in the private sector.

PwC Pledge-ometer: carbon pledges don't add up

The emission reduction pledges made by political leaders in the run up to Copenhagen are insufficient to put the world on the pathway to a low carbon economy.

In our report on 'The Low Carbon Economy Index', published just before the start of COP-15, we modelled a low carbon pathway which stabilises GHG concentrations at 450ppm and keeps global warming within 2° C. Our target for 2020 is 40 Gt CO_2e per year, compared with business-as-usual (BAU) emissions in our model of almost 60 Gt CO_2e. This target is consistent with the more ambitious of the three scenarios put forward by Lord Stern in December[1]. We believe that a more ambitious interim target is justified by the latest scientific evidence and by economics – it is important that investment in the next decade does not lock in long-lived higher carbon infrastructure, as this risks stranding capital.

[1] "Deciding our future in Copenhagen: will the world rise to the challenge of climate change?" December 2009. Stern's central case is a reduction to 40 GtCO_2e by 2020



Assessing the pledges made at Copenhagen

Our analysis shows that national policies and pledges made to date should reduce emissions from BAU to between 50 Gt CO_2e (with current policies + basic pledges) and 48 Gt CO_2e (including enhanced or conditional pledges)[2], after taking account of cross-border offsets. This would leave us some considerable way short of the low carbon pathway – based on the basic pledges of key economies we estimate a cumulative overspend on the global carbon budget of around 50 Gt CO2e by 2020, which is roughly equivalent to the aggregate emissions for the entire world for a year. Any shortfall in ambition in the period to 2020 will require more reductions later and could threaten the stabilisation goal.

Pledges come in many forms – absolute caps, intensity targets and reductions from BAU. To make sure the sum of the parts adds up to the whole, we need an effective monitoring, reporting and verification regime. Carbon offsets may to lead to double counting where developing nations take on targets. The growth in offsetting through the carbon markets is a good thing as it provides private sector funding for green investment. But the ambition of the pledges must take account of these offsets. Based on statements made in the US Congress and by the European Commission, we have estimated that annual carbon offsets could number over 1.5 Gt CO_2e in 2020. This compares against a total of only 0.34 Gt CO_2e issued by the CDM Executive Board to date.

We intend to update the PwC Pledge-ometer as new pledges are announced and, in particular, following the end January deadline for submissions to the UN.

Follow the money

One aspect of the Copenhagen Accord which does include some numbers is financing – "approaching USD 30 billion for the period 2010-2012" and "a goal of mobilizing jointly USD 100 billion a year by 2020".

The EU has agreed to provide €7.2 billion (£6.5 billion; USD 10.6 billion) over the next three years (2010-12) to this 'quick-start fund', Japan has pledged $10 billion and the US $3.6 billion.

[2] The PwC model for both the 50 Gt CO_2e and 48 Gt CO_2e assumes a significant contribution from limiting emissions from land use, land use change and forestry (LULUCF) and the continued role of existing carbon sinks. Specifically, net annual CO2 emissions from land use changes and forestry are around 5.8GtCO2 in 2008, declining to around 1.4GtCO2 by 2020. Current REDD estimates expect it to deliver around 5GtCO2 emissions reduction by 2020. Global absorption capacity of the planet (oceans, forests etc) is around 15 GtCO2 per annum and broadly stable over time.

The long-term funding goal builds on a statement by Hillary Clinton that: "In the context of a strong accord in which all major economies pledge meaningful mitigation actions and provide full transparency as to those actions, the US is prepared to work with other countries towards a goal of mobilising $100 billion a year to address the needs of developing countries."

The longer term funding goal assumes an important role for carbon markets and for other private sector money to leverage public funds. A reasonable rule of thumb is that a dollar of public funding can lever at least five dollars of private sector investment. Even the CDM, which is much criticised for being bureaucratic and slow to approve projects, has leveraged $95bn in low carbon projects in developing countries since 2002[3].

Funding to support adaptation and mitigation by developing countries is a critical component of the global response to climate change. In September last year, the European Commission estimated that developing countries would need to spend €100 billion (USD 143 billion) each year on adaptation and mitigation. Of this, 20-40% should come from developed countries, 40% from the carbon markets and the remainder from the developing countries themselves.

What needs to happen next?

The focus now should be on what needs to be done next. There are four immediate priorities:

1. Make a quick start on the Quick Start programme

If anything, the $30 billion support for poorer nations through to 2012 exceeded expectations. The challenge will be to strengthen the policy and institutional frameworks in Africa and elsewhere to support an accelerated deal flow and to bring forward credible projects.

2. Build more ambition into national plans

Ambitious policies and targets at a national level will drive investment, innovation and change. Working together with government, there are substantial opportunities in energy efficiency, green technology, renewable energy and carbon markets. Green jobs, green growth needn't just be a political slogan.

3. Complete unfinished business on forest carbon (REDD+)

Action on deforestation must be a priority. Good progress was made in negotiations in Copenhagen and money was promised. REDD+ cannot wait for a comprehensive deal on climate. Our expertise in forest finance and carbon markets can help make this a reality.

4. Learn lessons, build bridges and move on

Other gatherings such as the Major Economies Forum or G20 may prove to be more effective at making progress than the COP, though the UN will continue to play an important role in monitoring progress by countries. Effective partnerships, between countries and between public and private sectors, can drive the deployment of low carbon technology and accelerate investment where it is needed most.

[3] The World Bank (2009) State and Trends in the Carbon Market

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