

Is \$0 your best guess?

Many companies do not yet factor in a price for carbon dioxide (CO₂) emissions into their corporate planning. But this effectively means they are assigning a value of zero to their CO₂ position, which is unlikely to lead to good decisions, says

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Emerging climate change policy regimes and evolving greenhouse gas (GHG) markets are increasingly important for corporate decision-makers around the world. Readers of *Environmental Finance*, of course, do not need to be convinced of the sheer magnitude of voluntary and mandatory climate change initiatives being discussed at national and international levels. And few observers believe that the United States will remain on the sidelines of this issue indefinitely. When that changes, all bets are off.

For companies assessing the implications of a carbon-constrained world, understanding the future cost of carbon dioxide (CO₂) emissions credits (or the value of emissions reductions) is the billion-dollar question. Having an answer to this question is critical to a company's ability to assess future risk and competitiveness, determine company policy, evaluate business opportunities, and make R&D decisions.

The reasons are obvious. Even a modest CO₂ liability could:

- reduce the net present value (NPV) of a new 500 MW coal plant by \$120 million (a 5% reduction on internal rate of return);
- impose a \$115 million NPV cost per million tons of capacity at a coalmine (over 20 years); and
- make huge new Canadian oil sands projects economically unattractive.

Many companies recognise GHG risk as perhaps the single most important environmental risk they face. Some have already assigned staff from their policy or environmental, health and safety teams to work on

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GHG strategy. Yet many of these same companies still don't internalise a value for CO₂ in corporate decision-making. Why? "It's too uncertain."

Paradoxically, the implication of this decision is that most companies – whether intentionally or not – effectively value CO₂ at zero. Yet, when asked, few companies would say that zero really is their best estimate of future GHG liabilities or opportunities.

It is not difficult to understand why companies would – implicitly or explicitly – value CO₂ at zero. Perceived policy and market uncertainties are always good rationales for further study or for adopting a wait-and-see attitude. But does the 'more study, wait and see' approach result in good business decisions? For many companies, the answer to this question is almost certainly "no".

What will prices be?

Current GHG price curve predictions, often derived from modelling, vary from only a few dollars per ton (roughly equivalent to today's market) to more than \$100/ton (on a CO₂-equivalent basis). Unfortunately, models being used for these efforts are poorly suited to the task. In many cases, they do not even seek to define or characterise the commodity (eg real emissions reductions) for which they predict a future price.

Many technical and policy variables will shape the future value of CO₂ reductions. Factors include the treatment of Russian 'hot air', the cost of mitigation technologies and offset projects, and future commitment period mandates. But they also include public opinion and the state of climate change science. Both the demand for, and supply of, emissions reductions in future GHG markets will be driven by yet-to-be-made policy and political decisions.

These will not be typical commodity markets; thus, the results of traditional macroeconomic or commodity-pricing models (many of which have a significant 'black box' component) are highly questionable and contribute to the wide range of results. It's not surprising that it is difficult to get senior company management to 'buy in' to these estimates for strategic planning purposes.

Getting 'buy in'

Companies, particularly energy-sector com-



panies, constantly plan and act in the face of policy, technical, and market uncertainties. Prudently anticipating the likelihood of future GHG mandates is not fundamentally different, notwithstanding common perceptions to the contrary.

What's missing for most companies is a price curve they are comfortable with using for decision-making purposes. As many companies can attest, developing a strategy is one thing. Getting the generation or acquisitions department to 'buy into' and implement the strategy is another matter. If companies are going to accept forward GHG price curves, stakeholders need to have a hand in the specification of the policy scenarios used and in specifying the link between policy scenarios and the shape of the GHG price curve. This task can be done, although it certainly is not as simple as commissioning an outside report on the market. If the right company representatives are involved, you can end up with true corporate 'buy-in'.

Forward-thinking companies have shown that the uncertainties around future GHG mandates and markets can be bounded to their satisfaction; they don't have to be stuck with a \$0 'uncertainty default'. Companies can develop GHG policy and price curve scenarios upon which they can rely for risk management and investment purposes. Sure, the results won't be perfect. But it really doesn't matter whether the answer is exactly right, if it serves the company's needs. Even if these decisions turn out to be wrong in one direction or the other, they will have led the company to make business decisions on the basis of the best possible information.

Conclusions

The bottom line in 2002 is that strategically anticipating GHG mandates is not a business luxury – it is a matter of business prudence. Those of us working in the field need to make this case more effectively. ■

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