

# The Emerging US Climate Change Framework

## An SDG Perspective

**A**s the proposed greenhouse gas legislation wends its way through Congress, we continue to be impressed by the fact that few of the uncertainties over the ultimate shape and impact of the legislation have been resolved.

Turn back the clock a year: The Lieberman-Warner Bill seemed to have provided a guide to the type of legislation that would ultimately emerge. By June 2009, the Waxman-Markey Bill seemed to have created a perhaps unexpected compromise on some of the most contentious details of a climate change regime. But as the debate has moved to the Senate, the underlying fissures have started to re-emerge. At the time of writing, late July 2009, the remaining uncertainties seem to us to fall into four categories: the overall shape and timing of climate change legislation, the details of cap and trade, the business impacts of cap and trade, and future changes.

### Shape and Timing

Despite the progress made in the House, there is still considerable doubt about whether a similar compromise can be reached in the Senate this year. As well as the details of a cap and trade system, other major issues such as the role of nuclear and Carbon Capture and Storage will complicate the Senate

debate – and the alternative of a carbon tax may not be completely dead. With industry, coal, and agriculture lobbies still actively seeking changes and an environmental community increasingly restive, reaching a compromise in the Senate and subsequently during reconciliation will not be easy or quick. As

the health care debate takes center stage, it is hard to believe that climate change issues will not be delayed or that House and Senate members may find taking difficult and sometimes unpopular decisions on two major pieces of legislation daunting.

If compromises cannot be reached, one possibility we see is for the Waxman-Markey proposals to be passed in 2009 without Title III,

the global warming provisions. If climate change is indeed delayed to 2010, the impending midterm elections may strongly influence the kind of compromises that can be reached. And waiting in the wings is the possibility (or threat) that, in the absence of climate change legislation, EPA may seek to utilize the Clean Air Act to limit carbon emissions.

### Cap and Trade Details

If the climate change legislation is to be enacted in 2009, many details included in the House bill may be changed in the Senate or during the reconciliation process. As we have found with

SHAPE AND TIMING	BUSINESS IMPACTS
<ul style="list-style-type: none"> <li>▪ Role of Nuclear/CCS</li> <li>▪ Carbon Tax</li> <li>▪ Effect of Health Care Debate</li> <li>▪ 2009 or later</li> <li>▪ Midterm elections</li> <li>▪ Clean Air Act</li> </ul>	<ul style="list-style-type: none"> <li>▪ Economic Recovery</li> <li>▪ Fossil Fuel Prices</li> <li>▪ Solution Specific Mandates / Incentives</li> <li>▪ Carbon Prices</li> <li>▪ State Regulatory Treatment</li> </ul>
CAP & TRADE DETAILS	FUTURE CHANGES
<ul style="list-style-type: none"> <li>▪ Overall Cap</li> <li>▪ Allowance Volume / Distribution</li> <li>▪ Use of Revenues</li> <li>▪ Offsets</li> <li>▪ Banking / Borrowing</li> <li>▪ Cost Containment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Political Shifts</li> <li>▪ Sticker Shock</li> <li>▪ Catastrophes</li> <li>▪ Technology Breakthroughs</li> </ul>

other environmental legislation, “details” matter in influencing major investment, resource allocation, and operating decisions. Among the most important are:

- The speed of the reduction in the overall cap on greenhouse gas emissions
- The volume and distribution of free allowances
- The use of allowance revenues
- The volume and nature of offsets
- The provisions for banking and borrowing
- The cost containment provisions

As the health care debate has shown, the current fiscal situation has brought the concept of “deficit neutral” to the fore, making the central area of compromise on climate change, the potential allocation or auction of allowances and the distribution of potential revenues to competing interest groups, a particularly volatile battleground. Equally, the realization that only a relatively high carbon price, say above \$40/ton, will actually make a significant change to the dispatch order and reduce carbon emissions could lead to a revolt by moderates.

It is certainly possible that these two categories of uncertainty may be resolved by the end of this year by the passage of comprehensive climate change legislation. But two further categories remain which will ensure that any decisions that affect carbon emissions will be subject to considerable uncertainty for years to come.

## Business Impacts

Despite all of the detailed analysis by government bodies, NGOs, and consultants, the business impacts of any particular climate change regime remain highly uncertain. Furthermore, these uncertainties have been compounded by the severity of the current recession, making forecasts of economic activity over the next five to 10 years more than usually suspect. Combined with the unpredictability of fossil energy prices, all reasonable forecasts of carbon price show a wide range of potential prices – and hidden within most price forecasts, presented on an “equilibrium basis,” is the likelihood of extreme volatility.

As solution-specific mandates or incentives, such as federal and state renewable energy standards, incentives for various forms of energy, and energy efficiency mandates and incentives, interact with the market-based cap-and-trade system, the price signals offered by carbon markets may be unpredictable and perverse. For energy companies facing major decisions on generation or supply portfolios, including decisions on the

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retirement of existing capacity, the extreme uncertainty of carbon prices significantly complicates the analysis and puts emphasis on risk capacity and tolerance. For regulated utilities, these market uncertainties are further compounded by risk of regulatory disallowance for stranded assets and prudence reviews of allowance costs, particularly as regulators see the costs of carbon reduction in rising customer tariffs.

## Future Changes

Whatever climate change legislation is passed within the next couple of years, the probability of future changes in the greenhouse gas framework is high. Such changes could be triggered by:

- Major shifts in the US political landscape unrelated to climate change issues
- Adverse reactions by consumers and industry to unexpected costs of carbon restrictions
- Catastrophic meteorological or humanitarian events perceived to be instigated by global warming
- Technological breakthroughs reducing the cost of carbon controls

With major investments in generation and transmission having an economic life of 30 years or more, such uncertainties must be factored into resource allocation decisions.

In summary, it is apparent that waiting for “greater certainty” is not an option for today’s energy companies. Instead, prudent decision-makers embrace uncertainty and deal proactively with risk, sequence decisions carefully to take advantage of emerging information, evaluate a full range of alternative strategies, and seek out options that increase value-capture.

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