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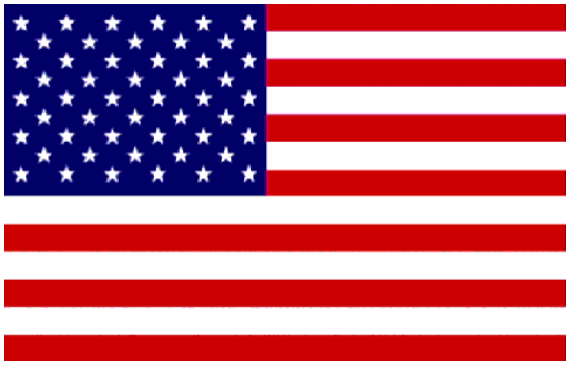
CARBON*first* USA

Climate policy and market insights



In this US-focused June edition of CARBON*first*, IDEAcarbon takes a special look at US climate policy, both domestic and international. Leading American policymakers and market participants give their views on the future of US cap-and-trade and on the evolvingg US position in global climate talks. IDEAcarbon offers a house view on what the US' next steps will be in the climate arena, as well as an analysis of the progression of the Waxman-Markey bill through Congress.

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Highlights

- IDEAcarbon believes that the US Senate will pass economy-wide cap-and-trade legislation and send it to the White House in early to mid-2010
- Policymakers may have to make further concessions on cost containment to bring industrial and coal state votes on board, especially in the Senate
- The US will likely commit to a set of ranges in Copenhagen, e.g. on targets, and finance, rather than to exact numbers, and fine-tune them afterwards
- Copenhagen will be crucial to shaping the Senate's response to US climate legislation, particularly regarding offsets and targets, and vice versa
- Prospects for a global deal are now high; institutional capital can now take measured risk in anticipation of a uplift in carbon market size and significance

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IDEAcarbon House View: US policymakers prepare to 'market' 30% US deal in 2010; path to global deal looks decisively positive; major nations (including China) want a deal.

By Mike Gallagher, Shandi Modi and Alessandro Vitelli

Key points

- Discussions with officials at the centre of policy making in USA leave IDEAcarbon with the impression that US policymakers believe that economy-wide cap-and-trade legislation will pass the Senate and be sent to the White House in early to mid-2010.
- US policymakers admit that they will have to make further concessions on cost containment to bring industrial and coal states on board, especially in the Senate. In addition, IDEAcarbon cautions that this Administration and Congress could be quite bumpy and could raise temporary fears about eventual passage.
- The US will participate fully in Copenhagen, on the understanding that its position will largely depend on the prospects for passage of domestic legislation. IDEAcarbon sources believe that a global agreement will be of positive influence on the US and place pressure on the Senate to act. US policymakers want to ensure that by autumn they are twin-tracking domestic and international progress to avoid leaving the President empty-handed.
- Whatever happens in Washington, the scale of America's domestic ambition will to a considerable extent determine the outcome of Copenhagen. Prospects of a bilateral deal with China are advancing well at the highest level. IDEAcarbon's present assessment is that China does want a deal to close end-2009 or 2010.
- To bridge the gap between domestic politics and international pressure, IDEAcarbon gets the impression from officials that the eventual US deal could be spun as a headline 30% reduction. Forestry (in the form of soft, large Amazon projects) or CCS all receive favourable interest among senior officials.
- In turn this could be a catalyst for a move towards a 30% EU reduction, as EU policymakers are under intense pressure to pursue a 30% target. A US deal marketed at 30% and EU 30% target could be a bullish spin for the CDM and JI markets and prices into 2010.

We have a good idea of where President Obama would like to be in the climate space – at the heart of the UNFCCC talks, brandishing a firm commitment to cut US emissions by at least 15% from 2005 levels by 2020, and with a legislative proposal for a tough domestic cap-and-trade scheme passing safely through Congress.

While we may not be there yet, there is still reason to hope that given a fair wind, the US could find itself in such a position come December. However, so many different things need to happen that the path towards a successful outcome in Copenhagen that IDEAcarbon recently spent time talking to officials to understand the highest level thinking from US policymakers.

Domestic legislation

Firstly, the US administration will need a solid legislative proposal for a cap-and-trade scheme that has a strong chance of being passed by both the House of Representatives and the Senate. While the Waxman-Markey bill may have been watered down in many respects in the last few weeks, it has managed to hold on to the key element that will inform the rest of the world's response: a moderately ambitious commitment to cut emissions by 17% from 2005 levels by 2020.

While this isn't the 20% cut that Congressman Henry Waxman and his colleague Edward Markey envisioned, it is a compromise that falls exactly between their initial vision and President Obama's oft-stated 15% target.

The bill's passage through Congress will also determine the US delegation's room for manoeuvre in Copenhagen. President Obama is well aware that any international treaty has to be ratified by the Senate, and he will be keen to ensure that a domestic climate bill matches as much as possible the ambitions of a global deal.

The further along the legislative process that bill is, the clearer the mandate for the US negotiators. Congressman Waxman has managed to squeeze a great deal of work into a short period of time while the bill has been under his direct stewardship, but when it is debated in the full House and then in the Senate, its progress is not as assured.

IDEAcarbon gets the impression that a climate bill won't pass through the entire US legislative process (both houses of Congress and the White House) until early 2010 or perhaps even the first half of the year. We expect there to be a very drawn-out debate in the Senate, where Democratic support is less certain, and where concessions may have to be given to coal-producing states.

The Waxman-Markey bill has already had to concede ground on auctioning, and shift to a gradually phased-in process. Much of the support from industry and the power sector has been engaged through a commitment to free allocation of allowances, but US policymakers admit that support from the states and their senators may require further concessions. Equally, efforts to keep the costs of the scheme down may encourage amendments to boost and widen the scope of offset use in the scheme.

US officials acknowledge that there remains a risk that further amendments may be tacked onto the bill by opponents of cap-and-trade or even by protectionists, who remain concerned about carbon leakage. The spectre of tariffs has been raised in the past and may well rear its head again: if this were to happen, the timing and scope of any tariffs would be an important determinant in the response from other countries.

If, in a less optimistic scenario, there is no bill advancing through the Senate by the time Copenhagen begins, IDEAcarbon is left with the impression that the US will continue to participate fully, but on the understanding that its position will depend largely on the prospects for successful passage of domestic legislation.

Such a situation may have unintended benefits for the Obama administration, as the Senate would then see an ambitious global agreement as simply waiting on its decision. After the US Senate's rejection of the Kyoto

Protocol a decade ago, there will be considerably more pressure this time on legislators to step up to the mark.

Whatever happens in Washington, the scale of America's domestic ambition will to a considerable extent determine the outcome of Copenhagen.

Engagement with other countries and schemes

US engagement with other countries will also count for much in the run-up to the talks in December. A number of senior government ministers have lately signalled that China's position on emissions reductions is moderating, for example, and privately US policymakers admit that bilateral US-Chinese talks have reached an advanced stage.

An accord between the two to undertake joint action on emissions could be instrumental in setting the stage for a post-2012 agreement. Once this is achieved US policymakers want to strike a deal with the EU. However, it will not just be China with whom the US will have to agree. The EU is pinning its hopes on a transatlantic carbon market, and is hoping that a strong US commitment will be enough to trigger its own shift to a 30% cut in emissions from 1990 levels.

However, while the EU ETS is firmly wedded to the Kyoto Protocol and its flexible mechanisms, there is much distrust of the CDM in the US. Forestry (in the form of soft large Amazon projects) and CCS all receive favourable interest among senior US officials. At the moment, prices for Kyoto offsets are largely dictated by the European market.

While the Kyoto Protocol, the EU and the US are all looking to engage new technologies such as CCS for their trading schemes, the US may not appreciate the price of offsets being determined by other markets.

The plethora of non-UNFCCC organisations that are also feeding into the negotiating process will also have their part to play; already President Obama has revived his predecessor's Major Economies Meetings process, and the G8 summit this summer will also devote time to the issue of a post-2012 agreement.

UN Secretary-General Ban Ki-Moon has also scheduled a climate summit for September 22nd, at which heads of government are also expected to push the process along.

US policymakers want to ensure that by the autumn they are twin-tracking domestic and international progress to avoid leaving the President empty-handed. Clearly, a UNFCCC-brokered agreement will depend in large part on the outcomes of this pyramid of agreements and meetings.

The EU in particular needs a strong US presence and commitment to a post-2012 framework agreement. IDEAcarbon understands that the EU leadership is under intense pressure to ramp up Europe's emissions commitment to the 30% reduction from 1990 levels envisioned by the Emissions Trading Directive, and will be very keen to see the strongest possible US target.

While Waxman-Market only currently foresees a 17% cut from 2005 levels by 2020, both the US and Europe will work to ensure that the US measures are seen in the best possible light. In order to maximise the impact of US regulations, supporters may point to the inclusion in Waxman-Markey of renewable energy standards, the impact of which could be tacked onto the 17% reduction target. The recently-announced vehicle efficiency and emission standards may also be amalgamated to present a total reduction target in excess of 20%. IDEAcarbon gets the impression from officials that the eventual US deal could be spun as a headline 30% reduction.

In turn this could be a catalyst for a move towards a 30% EU target, given the strong pressure on European policymakers at the highest level. A US deal marketed at 30% and EU 30% target could be a bullish spin for the CDM and JI markets and prices into 2010.

Eileen Claussen, President of the Pew Centre on Global Climate Change and Strategies for the Global Environment

- The Senate will wait until 2010 rather than 2009, but it is very likely a US carbon market will be passed into law this Congress
- Copenhagen will be crucial to shaping the Senate's response to US climate legislation, particularly regarding offsets and targets, and vice versa
- The US will probably commit to a set of ranges in Copenhagen, e.g. on targets, and finance, rather than to exact numbers, and fine-tune them afterwards

Eileen Claussen is the President of the Pew Center on Global Climate Change and Strategies for the Global Environment. One of the most influential climate change figures in Washington, Ms. Claussen is the former Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs.

Do you believe a US cap-and-trade bill can be passed out of Congress in 2009? What chance does the bill have of passing through the Senate if it passes through the House?

It will be very challenging to get a climate bill through both houses of Congress, through a conference committee, and sent to the President by the end of 2009. I do think there will be a bill that passes the House in 2009, probably by the end of this summer. That bill will be the starting point for the Senate. But the Senate is likely to be much slower and will most likely move a bill in 2010. So there is a strong chance a bill will be signed by the President by the end of this Congress.

In the Senate there are a number of different committees that will deal with the various elements of the Waxman-Markey bill. Title III of the bill, the cap-and-trade bit, will probably come out of the Committee on Environment and Public Works, chaired by Senator Boxer. The Senate Energy and Natural Resources Committee, chaired by Senator Bingaman, will pass some form of a renewable energy standard, perhaps by the time the Waxman-Markey bill arrives in the Senate.

The real action will then happen on the Senate floor when these elements come together. The chances of not getting a cap-and-trade bill argued, dissected, debated and then rebuilt on the floor by the end of 2010 are very small.

How similar do you think such a bill will be to the Waxman-Markey bill as it currently stands?

The Waxman committee {the House Energy and Commerce Committee} contains Congressmen from a lot of industrial, coal, auto and oil states. So the interests and views that exist in the Senate are already present in the Waxman committee. The Congressmen's views will have been to some extent accommodated in the bill that goes to the floor of the House. This is shown in the many agreements that have already been reached, in the form of free allocation to local distribution companies that supply electricity, to industrial companies that produce globally traded commodities, and a little to oil companies.

This is an excellent starting point in the Senate. That said, there may be a need for additional elements, and as mentioned above the discussion on the Senate floor is key. The Boxer committee is not representative of the Senate as a whole. This means that the

perspectives and demands of more conservative Democrats from industrial and coal states will not be heard until the bill leaves committee. In addition, the Senate is very interested in nuclear energy. Including provisions for nuclear energy would help gain some Republican votes and some of the "iffier" Democratic votes.

The Waxman-Markey bill states that international offsets primarily need to come from US-administered sectoral crediting schemes and REDD programs, leaving little demand for UN mechanisms such as the CDM. This has created concern over CER demand. Do you see this changing in the future?

There is a rather jaundiced view of the CDM in the US, as the Waxman-Markey bill reveals. There is tremendous scepticism about the validity of CDM offsets and the CDM process. People need to be educated as to the elements that have and have not worked, and as to how the elements that haven't worked might be fixed in a reformed CDM. But there remains between nine months and a year and a half to work on this issue in the House and Senate.

On the assumption that the Senate doesn't act until after Copenhagen, what comes out of Copenhagen will be critical to changing the perception and the reality of what the interests and influences in the Senate are. For example, a re-doing of the CDM or a more sectoral approach emerging from Copenhagen would be very helpful in influencing the Senate to accept more CDM offsets.

The US has in the past been sceptical of interaction with international and multilateral authorities in the climate space. How do you see this position evolving, in particular as regards a post-Kyoto agreement?

I think the situation is changing and attitudes are becoming more positive. Both from the Senate's resolution and the position of the new administration, there is a real sense that countries have to be in this together and that no country can go it alone. That said, there are still those who will be reluctant to sign up to an international agreement. Some of the resistance will be softened if the US acts first, because it is easier to agree to what you have already decided to do and then persuade others to also take on commitments.

The Senate requires 67 votes to ratify a treaty. Achieving 60 votes to pass a bill is challenging and reaching 67 could be even more of a hurdle.

However, it is my belief that getting 67 votes may in fact be easier than getting 60 votes. The 60 votes will be reached on the basis of unilateral US action to establish a mandatory domestic emissions reduction program. The next step will be to commit to those reduction targets internationally, while convincing other countries to commit internationally to their own reduction targets or steps. Assuming that the US will have already passed domestic action, the international agreement serves to bind others to their commitments: a palatable idea to US legislators. So if the international agreement does not impose additional requirements on the US, passing the treaty may be easier than passing the bill.

Do you think that in the absence of a federal bill, the US can commit to a quantified reduction target in Copenhagen?

The real issue is how confident the US is about what the US target may be. Imagine I am the Administration. If the House had passed the bill but the Senate had not made much progress, I would not agree to a specific quantified target in Copenhagen. I would instead agree to a range of targets.

There are a lot of extremely difficult issues in the international discussions and it is uncertain whether enough progress has been made to reach a full, final agreement in Copenhagen, regardless of the US position. A framework may be agreed upon, with ranges for financial flows and ranges for targets, and kinds of actions to which some major developing countries might be willing to commit. Such a framework in itself would be a

huge achievement, given how far there is to go. We therefore have to think of Copenhagen and beyond.

What do you think will be the defining elements of the US post-2012 position when push comes to shove? And when will the US be ready to lay out its positions?

There is a need that the major emitting developing countries make commitments. An understanding exists in the US that they will not be the same commitments as the US, the EU or Canada themselves make, in form as well as in stringency.

There is still a lot of thinking to be done on finance. The demands for finance from some developing countries are very ambitious and are unlikely to be met by any developed countries. Developed countries thus need to find the best way of financing emissions reductions in developing countries (or in those developing countries that need financial assistance). What the US wants and is willing to do on finance has not yet been decided.

The third issue is that of comparability amongst developed countries. It is important to be realistic. The notion that the US will reduce emissions by 25-40% by 1990 levels by 2020 is not on the table.

The Major Economies Forums, one of which will happen at the end of May, are a very useful platform to discuss what can and can't be done in Copenhagen.

What commitments and policies does the US expect or need from China if it is to come to an agreement in Copenhagen?

The US expects commitments from China, and it would help to be flexible about what those commitments might be. They almost certainly will not be economy-wide, but they might be sectoral in nature. Sectoral commitments would be viewed positively by the US, but the question would be how ambitious they are. The numbers are as yet unknown.

The EU would like to see an OECD-wide carbon market by 2015, and in particular to link the EU ETS with the US carbon market. Do you see this as firstly feasible, and secondly advantageous?

If the US passes legislation in 2010, it would be possible to link markets in 2015. The broader the net, the more cost effective the reductions will be. Linking is thus highly desirable. How long it takes to link with other markets depends on how long it takes to establish the rules and regulations of the domestic program after having passed a bill. The process of making rules is long and arduous, given how regulatory programs work. Having received the legislation, you have to propose rules, and then to take comments before going final with the rules, which might be challenged.

What do you view as the ideal price of carbon necessary to achieve domestic abatement in the US?

To begin with, the price of carbon will be relatively low, perhaps enough to achieve efficiency gains but not much else. It is for this reason that there are complementary measures included in the Waxman-Markey bill: measures that push renewables and deal with coal for example. The combination of measures in the bill will get us to a reasonable carbon price by 2020. But, it is unlikely to be high enough to promote CCS, which is why there are other provisions for CCS in the bill. Facilities built between now and 2015 have to be able to be retrofitted with CCS technology, and those built after 2015 have to have CCS technology. The Waxman-Markey bill is a carbon market bill with a host of complementary measures designed to help achieve the emissions reductions that we need.

Dirk Forrister, Managing Director, Natsource

- Compromise on Waxman-Markey is within reach and industry is ready for a solution; there may be changes to the allocation system and the 2020 target
- Internationally, if the US is confident that the flexibility mechanisms can work well, it will commit to more ambitious target: this is the crux of the matter
- US-administered offset schemes as laid out in the Waxman-Markey bill could be compatible or merge with UN schemes on the table in international talks

Dirk Forrister is Managing Director at Natsource LLC, where he is responsible for research and advisory services on climate policy and carbon markets, and new carbon fund development. Until recently he worked in the company's London office, where he was responsible for building the company's carbon finance business in Europe. Prior to joining Natsource, Mr. Forrister served as Chairman of the White House Climate Change Task Force in the Clinton Administration, and prior to that was Assistant US Secretary of Energy for Congressional & Public Affairs.

Do you believe a US cap-and-trade bill can be passed out of Congress in 2009? What chance does the bill have of passing through the Senate if it passes through the House?

The House of Representatives is likely to pass a bill in 2009. The Energy and Commerce Committee has provided momentum, and the Speaker of the House desires the bill to pass from the House by autumn. I think the notion of getting a complete bill though House, Senate and conference this year is unlikely. That will happen in 2010.

The Senate is a tougher hurdle to clear because of the filibuster threat the Senate rules allow for. My suspicion is that Senate floor action will be protracted and may well last into the early 2010. In particular, there is a group of 15 Senators that represents much of the Southeast and industrial Midwest. Midwestern states (Ohio, Indiana, Illinois, Pennsylvania, Michigan and West Virginia) will be heavily impacted, along with Southeastern states (Arkansas, Tennessee, Alabama, and Georgia). All of them will need to be satisfied that electricity rates will not increase disproportionately and that industrial developments will not be badly hit.

It is a possibility, but with a small probability, that Senator Bingaman will push his energy bill forward and that cap-and-trade will be dropped.

I am optimistic about a final deal next year, as there is broad public consensus – including the business and environmental community, and state and local leaders – on the need for federal action.

How similar do you think such a bill will be to the Waxman-Markey bill as it currently stands, i.e. on the floor of the House of Representatives?

There could well be some additional compromises to calm the nerves of moderates of both parties, from the industrial Midwest and agricultural heartland of the country, but these compromises are within reach. Industry is ready for a solution to this problem. The power industry in particular has come a long way to be supportive of the allocation system, notwithstanding concerns about certain elements.

The cost-containment features of the legislation are critical to ease concerns of industry and agricultural states. Right now there is still some concern as to whether the

offset program envisioned in Waxman-Markey is actually workable. Will it produce enough domestic and international offsets? Further work is needed. The transition from free allocation to auctioning could also be made slightly more gradual, though it probably won't change much. The issue of relaxing the 2020 cap, e.g. from 17% to 14% below 2005 levels, will no doubt arise again as the bill moves across the House floor.

Perhaps more important is the concern that if the law is adopted in 2010 the EPA would have very little time to prepare the regulations necessary to run the program by 2012. So it wouldn't surprise me if the launch date of the scheme was postponed. This is more likely to arise as an issue in the Senate than in the House.

Another point is that the pending legislation has a strong dose of market oversight by the CFTC and FERC. I think those provisions need to be very carefully crafted so that the market does actually form itself and that there is not too much regulatory weight to it.

How do you think the relationship between US-administered offsets schemes, e.g. sectoral crediting and REDD, and the UN schemes such as the CDM will evolve in the in the future?

The offset provisions under debate internationally appear to be in-sync with the types of international approaches that the US government is advocating – this is clear from the recent US submission to the UNFCCC and the UN negotiating text also recently released. There is a strong reliance on REDD crediting, on sectoral crediting, and an interim reliance on the CDM. US offset systems could therefore be compatible or merge with what is being discussed within the UN.

The current legislation is however drafted with the goal in mind that the large emitters participate in the post-2012 regime with sectoral crediting, instead of project-by-project crediting. The CDM thus appears to be subject to some restrictions (see below). With such restrictions US legislators are trying to encourage China and other large emitters that want access to the US market to adopt sectoral crediting. The CDM would be reserved for smaller emitters and least developed countries.

The question of CDM host country eligibility is therefore the key uncertainty for the post-2012 offset market, much more than the issue of eligible sectors and technologies. There would be qualitative restrictions on certain types of assets such as HFC credits. But for a host country to supply offsets to the US would it would have to have a bilateral or multilateral agreement with the US, to ensure that it is supportive of the credits it supplies.

The Waxman-Markey bill places strong emphasis on US domestic offsets. From which sectors do you think such a large number of offsets could be generated?

Forestry, soil sequestration and improved farming practices will be significant sources of domestic offsets, in part because of the US' very large landmass. The Waxman-Markey approach to US forestry and agriculture will create some interesting new assets that have not been seen in the market to date. It is not clear yet whether other countries will accept these credits or whether they will just be for domestic use, but Canada, Mexico and other neighbouring countries may be interested.

Waxman-Markey puts many more sources under the cap than is the case in the EU for example – this is one of the big differences between the US scheme and others. Hence the potential for domestic offsets from methane reduction or other gases is lower in the US then elsewhere. This may be looked at again.

The US has in the past been sceptical of interaction with international and multilateral authorities in the climate space. How do you see this position evolving, in particular as regards a post-Kyoto agreement?

President Obama's leadership will be critical. He has the ability to communicate the importance of an international agreement

unlike any leader we've had in recent memory.

I believe this is a double-edged sword for many Americans. On the one hand there is scepticism about the way the US operates in international agreements or UN proceedings. On the other hand, if we are doing our fair share people want other countries to do their fair share. There is a growing realization that an international agreement is the most effective way to assure that. Without such agreement the problems associated with the US stepping forward on climate change alone would be much bigger.

Do you think that in the absence of a passed federal bill, the US can commit to a quantified reduction target in Copenhagen?

I believe that there will be enough of a consensus in Congress that the US will be able to agree in Copenhagen on the reduction range within which it will operate.

More challenging though will be for the US to have the confidence to accept that the market flexibility mechanisms will work well enough to make action affordable. This is the crux of the matter. Can the US be satisfied that the cost-containment features and the cooperative features will really work, emboldening them to take the kind of target the world would like to see? The determining factors will be whether the discussions around sectoral crediting go well, whether CDM reforms are real, and whether the REDD crediting system is truly workable.

We thus have a chicken-and-egg problem. The US needs to be satisfied that the flexible mechanisms will produce before it can commit to an effective target, while if the US does not commit to an effective target it is hard to see those mechanisms coming together to produce.

What do you think will be the defining elements of the US post-2012 position when push comes to shove in the international negotiations? And when will they US be ready to lay out its positions?

The defining elements will be in two broad categories: the stringency of the targets and the time period, and the flexibility mechanisms that are paired with the targets. The US may leave their reduction target open, i.e. within a range, and subsequently fine-tune it after Copenhagen once they know how and how well the flexibility mechanisms will work. That way, they will also remain flexible with regards to the House and Senate.

The US is bringing positive discussion to the table in suggesting targets that extend until 2050. There will also need to be some objective targets according to which countries such as China begin to take on binding targets, perhaps starting with sectoral reductions and moving towards economy-wide targets over time.

What do you view as the ideal price of carbon necessary to achieve domestic abatement in the US?

It is important for policymakers to understand that it's the emissions reductions that matter, not the price. The price ought to be as low as possible to achieve the cap. That is why the flexibility mechanisms matter so much. But from a policy perspective, consumers need to be convinced that the system is flexible enough to give them good deal. EPA modelling shows prices in the $10-20 range initially, rising to the $20-30 range in the mid-term. There is still a lot of learning to be done in the US before we know what that true price ought to be.

Josh Margolis, Co-CEO of CantorCO2e

- For carbon entrepreneurs there is a significant risk to acting too early, before the ink is dry on climate legislation; much may change before a bill is passed
- Eligible offset project types in a federal program may be: forestry, agriculture, land use, small landfills, energy conservation, transportation, industrial gas
- The transition from free allocations to auctions will – and should – be slow, in order to effectively allow emitters to wean themselves off a high carbon diet

Josh Margolis is Co-CEO of CantorCO$_2$e and oversees the management of North American emissions and renewable energy markets. Since 1985 he has provided environmental credit trading consulting, market development, and trading services for states, regulators, and industries in California, the West US, Texas, the Northeast US, and in numerous countries throughout the world.

Do you believe a US cap-and-trade bill can be passed out of Congress in 2009? How similar do you think such a bill will be to the Waxman-Markey bill?

There is a decent chance that there will be a cap-and-trade bill passed out of Congress in 2009. And it will have many elements of Waxman-Markey. It will be the product of compromise between competing concerns, e.g. between the Midwest and the coasts, utilities and merchant generators, upstream and downstream sources, small and large, and also between those that have spent the last few years teaching emissions trading theory and those that have spent their careers putting it to work. It is likely that the bill will be stand-alone, in other words not necessarily in-sync with the rest of the world. It will become operative regardless of whether the US signs a global treaty.

There is a significant amount of Congressional opposition to the Waxman-Markey bill and climate legislation in general, in particular from industrial, agricultural and coal-producing states. What policies and measures will be necessary to overcome such opposition and bring those states on board?

This is too big to be stopped. Today's opposition will be overcome by a formidable coalition made up of "not gonna wait anymore" Congressmen, businesses who see value in going and selling green, local and state legislators who have been engaged in the battle before the regime change in DC, and a President who understands that the US must lead the world in solving this problem.

Many of the very real concerns will be addressed as the bill makes its way through Congress. We see this with the number and diversity of sources in the program, how allowances are distributed, and the role of offsets. I believe that opposition will fade, as the majority in Congress will broaden the cap, reject 100% auctioning, support allowing sources to wean themselves off their high carbon operating profiles, allow the use of high quality domestic and international offsets, and include both up and downstream sources in the program.

A particularly thorny issue focuses on leakage and economic competitiveness. In order to level the playing field policymakers may decide that foreign firms not subject to carbon constraints will be invited to offset the emissions generated by their products that are imported into the US. This may also be the case for the US importers of products produced by foreign firms.

Proposals for US carbon legislation come and go and the future and design of a US cap-and-trade scheme is fundamentally uncertain. What are the opportunities and risks for early movers in the financial industry and for carbon entrepreneurs?

Without doubt there will be great change. And with this change will come fantastic opportunity. Certainly, some climate change entrepreneurs will make a fortune. It's a fair bet that a larger number will launch plans that will fail.

Consider that owing to this legislation, by 2050 our GHG emissions will be 10% of what they are today. That's despite a 50% growth in population (as compared to 1990). We are talking about hitting the "control alt delete" button on the current economy in favour of a bold new future. The changes will affect every entity that generates, distributes, and uses power, every business. How we make, distribute, and use products will be affected by this legislation.

Opportunities for early action should focus on the development of offset creation projects (see below). Cost issues aside, local projects – those that local politicians can stand in front of and participate with in ribbon cutting ceremonies – will have a slight edge over all but the most high quality international projects (though we do see high demand for international projects with the Social Carbon stamp). And there will be opportunities for those who will help build, provide, and finance technologies that will be used to build a new low carbon infrastructure. Of particular focus will be how we move freight and ourselves (locally, and long distance), generate and conserve power (especially if GHG reduction ownership issues can be worked out in favor of the power user), and how we manufacture certain products. Those who provide and deliver the solutions will stand to gain, if they get it right.

But for every winning business plan there will be a greater number that fail. This is a risky business. The government has yet to define absolutely who is in and outside the cap. The rules defining what is and is not an offset have yet to be written. We do not know how much of the solution will be imposed on industry, power generators, power distributors, transportation, upstream, downstream…in short, upon them vs. us.

To be sure, some of the early actors will suffer the consequences of ill-conceived business plans. But others will have the ride of the century. At CantorCO2e, we are doing our level best to assist them to carefully consider, evaluate, prioritize, and pursue projects that have a good probability of delivering recognizable offsets. Early actors who make good decisions will be the winners. But so too will be those who take a pass on projects that eventually will fail to produce high quality offsets.

Both the Waxman-Markey bill and the Lieberman-Warner bill place strong emphasis on US-sourced offsets. From which sectors do you think such a large number of offsets could be generated?

By definition, offset projects will involve sources that are outside the cap and have yet to be targeted for regulation. Forestry, dairy, small landfills, land use, mining, industrial gases, and even natural sources will be targeted. Again, YIMBY ("yes in my back yard") is the new watch phrase.

The Waxman-Markey bill states that international offsets primarily need to come from US-administered sectoral crediting schemes and REDD programs, leaving little demand for UN mechanism such as the CDM. How do you evaluate this, and do you see this changing in the future?

It is too early to conclude what will be allowed in the program from overseas. It is clear though that CDM credits will be scrutinized and let in only if they clear a distinct set of quality thresholds (i.e. are real, enforceable, surplus, and permanent). Offset developers, financiers, and users should steer clear of projects that come from sectors subject to leakage. In contrast, projects that also produce co-benefits should be given careful

consideration. Particularly attractive are those projects that reduce criteria pollutants (sometimes, worth, literally, $1 million per ton per year), as well as producing benefits to the host communities, enhancing natural resources, promoting biodiversity, providing jobs, and being profitable and sustainable over the long-term.

Which body or agency should be given authority for the financial regulation of the carbon market in the US?

First, the competence of the regulating body is more important than the logo on its business card. Yes, we should tap into the expertise of those who regulate our commodity markets. But we should also engage those at the EPA who have quietly and effectively run the acid rain program, one that is almost universally recognized as the most successful cap-and-trade program.

Second, it is important to have a single entity overseeing the market. Diverse, disconnected entities will complicate the challenges of monitoring and enforcing the market. The body that governs this market should have the authority to regulate all aspects of the market, not just the financial side.

What do you view as the ideal price of carbon?

One that encourages market participants to abate, seek out low cost solutions, comply with the law, support cost effective solutions, and operate within the cap. The number is dynamic. Let's also remember, that as valuable as carbon is, other co benefits that result from such greenhouse gas reducing projects can be worth tens, or even hundreds of times more than price at which the carbon allowance transacts. That is why CantorCO2e is in constant pursuit of triple bottom line solutions.

Steven Schleimer, Director, Energy and Environmental Markets Regulation, Barclays Capital

- The biggest opportunity for US carbon market participants lies in the offset market and in identifying eligible project types under a federal program
- There will not be enough domestic offsets in the early years of a cap-and-trade scheme to fill up the domestic offset import quota
- One agency should be given responsibility for carbon market oversight – the Commodities and Futures Trading Commission is well-suited for the job

Steven Schleimer is a Director of Energy and Environmental Market Regulation at Barclays Capital. Based in New York, Mr. Schleimer is responsible for providing coverage of all regulatory and legislative activities associated with power and emerging emissions market rules in the US, and for identifying and pursuing business opportunities in those areas.

Do you believe a US cap-and-trade bill can be passed out of Congress in 2009? How similar do you think such a bill will be to the Waxman-Markey bill?

There are a lot of negotiations about the Waxman-Markey bill. The bill is likely to come out of the House of Representatives this year, while the Senate is unlikely to move on climate legislation until mid- to late 2010.

One of the more controversial issues in the debate concerns the allocation of allowances, i.e. auctioning vs. free allocation. President Obama had pushed for 100% auctioning in his budget. It seems that instead there will be more of a transitional period from largely free allocation (e.g. to the power generating sector) to auctioning. This is a solution supported by many of the large trade groups in the US, including the Edison Electric Institute.

Proposals for US carbon legislation come and go and the future and design of a US cap-and-trade scheme is fundamentally uncertain. What are the opportunities and risks for early movers in the financial industry and for carbon entrepreneurs?

The biggest opportunity lies in the offset market and in identifying which types of offset projects will be eligible in a federal program. Developing such projects and buying the credits they produce may be cheaper now than in the future. Certain entities have begun to enter into this pre-compliance offset market from the voluntary market, in an attempt to amass a portfolio of projects or credits that they hope will count.

Carbon entrepreneurs are thus working to identify these sectors. The landfill sector is likely to be eligible in a federal program, as are the forestry and agriculture sectors. CCX is more uncertain, as it is unclear whether CCX credits will count in the future. Some entities are also buying up cheap RGGI credits now in anticipation of their acceptance in a federal scheme.

From a financial sector perspective, what are the most important elements in designing and implementing a US cap-and-trade scheme?

There is a debate over whether change is needed in commodities markets in general, and in particular whether all OTC transactions should be moved onto exchanges. The carbon market is likely to be swept up in the same changes and regulations as all commodities. In

our view carbon is not fundamentally different to other commodities and should be subject to the same rules. This is particularly the case with regards to the OTC vs. exchange debate.

How do you gage the position of energy intensive industries and the power sector towards US cap-and-trade?

To gage how far we have come you need look no further than the Edison Electric Institute (EEI), a trade organization that represents many major coal-using utilities. The EEI put out a set of principles some months ago. Rather than fighting climate legislation, they accept the fact that a cap-and-trade program will be implemented. Their objective is to ensure a transition period in the move from free allocations to auctioning, allowing business and infrastructure time to adapt and so as not to unduly burden customers.

A quick note on the power sector: in some regions of the US the power sector is completely regulated, while in others the sector is competitive. In the more unregulated parts of the country more auctioning is advantageous, to avoid windfall profits. In the more regulated parts of the country auctioning would simply increase customer bills. The power sector in those areas is thus pushing for free allocations and the regulators will adjust rates accordingly to avoid windfall profits.

There is a significant amount of Congressional opposition to the Waxman-Markey bill and climate legislation in general, in particular from industrial, agricultural and coal-producing states. What policies and measures will be necessary to overcome such opposition and bring those states on board?

For US industry cost containment is the main issue, and there are three key elements therein. One is the tightness of the cap, and the rate at which it decreases. A gentle rate of decline of the cap will prove popular. Another is auctioning vs. free allocation, which we have discussed already. A third is the use of offsets, because of their ability to contain costs. Finding a path that acceptable to industry and politicians from industrial states is the challenge.

Both the Waxman-Markey bill and the Lieberman-Warner bill place strong emphasis on US-sourced offsets. From which sectors do you think such a large number of offsets could be generated?

There will be a strong focus on forestry and agricultural offsets in the US. The decision on what project types are accepted will in part be determined by where the votes to pass the bill will come from, in this case Midwest farming states and Northwest forest states. Landfill gas and other forms of methane capture in the agricultural sector will be important. Renewable energy projects will probably not be allowed because there will be a separate Renewable Portfolio Standard.

It is our understanding that there are not and will not be enough domestic offset projects in the early years of the cap-and-trade scheme to fill up the domestic offset quota.

Which body or agency should be given authority for the financial regulation of the carbon market in the US?

Waxman-Markey calls for FERC to oversee the cash market and for CFTC to oversee the futures market. One of our concerns is that agencies will overlap and that there will be double-regulation. Some assert that the cash and futures markets impact each other, and parties can use the one to (illegally) influence the other. With two agencies responsible for carbon market oversight there is a risk of overlapping jurisdictions, and confusion and uncertainty over who is responsible for what. Our preference is thus to have one agency in charge of overseeing the market to avoid regulatory overlap. Our view is that given the nature of the market CFTC is probably more suited to take on the job.

If President Obama were forced to regulate carbon emissions via the EPA, as opposed to a bill coming out of Congress, the EPA could well delegate authority for financial oversight to FERC or CFTC. In the same way, when the

EPA implemented the Clean Air Interstate Rule (CAIR) to tighten up the existing cap-and-trade program to reduce SO_2 and NO_x, it made CFTC responsible for the futures market.

What lessons can be learned for US cap-and-trade from the regional schemes, e.g. RGGI, the WCI and the MGGA? How risky is investment in the regional schemes given the possibility of federal pre-emption?

One of the reasons behind RGGI was to show that a cap-and-trade scheme for carbon can be implemented and can lead to emissions reductions. The governors that signed up to RGGI did so with the intention of providing leadership to the federal government. Another lesson is that bigger is better. RGGI is small and liquidity is limited. Providing a hedge in the forward market is therefore difficult.

Both Waxman-Markey and Lieberman-Warner have stated that they will give allowances for participation in those programs. The mechanisms by which participants receive allowances is a little different in the two bills, but in effect both contain language stating that RGGI allowances can be traded in for federal allowances based on the cost of the former vs. the cost of the latter.

So while there is a little risk related to the mechanism by which allowances are converted, it is fairly certain that it will be possible to exchange regional allowances for federal.

What do you view as the ideal price of carbon?

One that reflects the cost of abatement.

Cap-and-trade: Prospects and Likely Structure

- The Waxman-Markey bill faces similar dynamics in the House as in the Energy and Commerce Committee and will pass to the Senate by autumn 2009
- To pass a climate bill in the Senate will be more of an uphill climb than in the House; the real debate will be on the Senate floor
- Though many concerns of industrial and coal state Democrats will have been addressed in the House, more measures are likely to be needed in the Senate

On 21st May the House Energy and Commerce Committee (E&C), chaired by Rep. Waxman, passed the revised Waxman-Markey bill (HR. 2454 the American Clean Energy and Security Act of 2009). With the bill now on the floor of the House of Representatives, the question arises as to what its fate will be in the rest of its legislative life. While its journey through the House may be relatively assured, its passage through the Senate represents more of a hurdle. Below follows an analysis of the electoral dynamics and issue-based challenges that the bill is likely to face over the next nine to eighteen months.

The House of Representatives

IDEAcarbon understands that the Waxman-Markey bill has a relatively good chance of success in the House, perhaps achieving passage by the end of the summer or early autumn as intended by House Speaker Pelosi. E&C is fairly representative of – or even more conservative than – the House as a whole, meaning that the bill is likely to face similar dynamics in the House as in committee.

In addition, many of the interests and concerns of conservative Democrats from industrial and coal states were addressed in E&C in recent weeks. As a result many changes designed to garner the support of opposing blue collar state Democrats and members of the Blue Dog Democratic Coalition (a House coalition of 51 conservative Democrats) have already been made. Such changes include (for further details of HR. 2454 see page 20):

- A loosening of the 2020 cap from 20% to 17% below 2005 levels
- The proportion of international offsets allowed in the scheme has increased: as before up to 1 billion domestic and 1 billion international offsets are permitted, but if the 1 billion limit on domestic offsets is not reached up to 1.5 billion international offsets may now be allowed
- The 5:4 discount on offset use has been removed, except for international offsets after 2017; that is, offsets now have an equivalent value to domestic allowances
- The free allocation of allowances has been specified: 35% of the cap to the power sector; 15% to industry; 9% to the natural gas sector; 2% to oil refiners; 9% for international forestry, domestic and international adaptation and technology transfer; and circa 15% for other purposes
- Overall at least 15% of allowances will be auctioned

Using *Energy and Environment Daily*'s tally of the climate positions of Congressmen and Senators one can see that of the 435 members of the House, 163 would vote yes, 146 would vote no, and 126 are sitting on the fence. 96 of the fence-sitters are Democrats, and of them 61 are from states in the South or Midwest and 42 are members of the Blue Dog Coalition. The changes made to the bill mean that the bill will have a fairly good chance of

winning the support of the fence-sitters and gaining the 50% simple majority of 218 votes necessary to pass to the Senate.

The Senate

In the Senate the outlook for the bill is more severe. The Senate is a more conservative place than the House and many senators, especially those from rustbelt states, are closely aligned with industrial and coal interests. The Senate electoral make-up and the filibuster rule also mean that industrial and coal states have proportionately more power in the Senate than in the House.

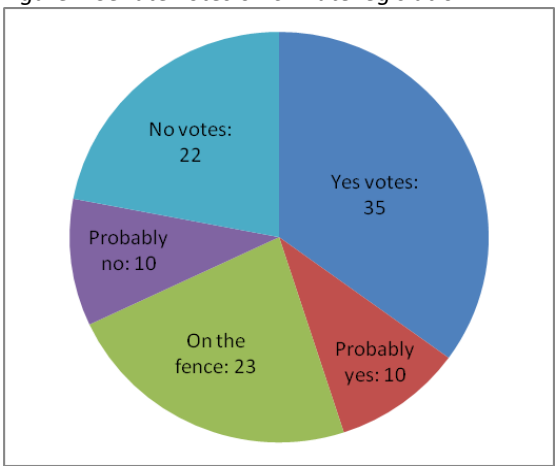
In the Senate the Committee on Environment and Public Works (EPW), chaired by Senator Boxer, has main responsibility for climate legislation, along with the Energy and Natural Resources Committee, chaired by Senator Bingaman, and the Finance Committee. If and when the Waxman-Markey bill arrives in the Senate, its various elements will be split up for discussion in these committees. Cap-and-trade will be taken up primarily by EPW, though (as Eileen Claussen says in this issue of CARBON*first*) EPW is not representative of the Senate and its interests, so the real debate will begin when the bill reaches the floor.

The Democrats (including the support of two Independents) may soon have a filibuster-proof majority of 60. But not all Democrats will vote along party lines. In fact, positions on climate policy vary as much by region as by party, especially amongst fence-sitters.

In the Senate, we can expect 35 yes votes, 10 probably yes votes, 23 fence-sitters, 10 probably no votes, and 22 no votes. 11 of the fence-sitters are members of the Gang of 15 Democratic Senators (who went against the party line to defeat the Lieberman-Warner bill last year) from agricultural and industrial states, four are Democrats and eight are Republicans.

To reach the magic 60 votes to overrule a filibuster the bill would therefore have to gather the 35 yes votes, the 10 probably yes votes, the 11 fence-sitting members of the Gang of 15, as well as the other four Democrats or four of the eight "on the fence" Republicans. This is not an impossible task but it does remain a hard one.

Figure I: Senate votes on climate legislation



Source: Energy and Environment Daily and IDEAcarbon

It is likely that more ways will need to be found to ease the concerns of rustbelt state Democrats. What these ways will be is hard to say, but further measures to contain the costs of cap-and-trade and reduce competitiveness impacts on industry will surely be called for, e.g. further relaxation of the mid-term cap; a longer transition period from free allocation to auctioning; more offsets; and border tax adjustments for imported products.

If accommodation cannot be reached there is a small but real possibility that the cap-and-trade element of a bill may be dropped in favour of legislation containing the other elements of the Waxman-Markey bill: clean energy, energy efficiency and a clean energy economy. Senator Bingaman is ready to push such an energy bill forward. While this outcome would ensure that some sort of pro-climate legislation will be passed, it would be a serious blow for the carbon markets, in particular as each Congress usually only gets one shot at a particular issue.

However, from its conversations with senior law makers, IDEAcarbon expects the Senate to vote in favour of cap-and-trade legislation by mid-2010, whether it is the Waxman-Markey bill or a successor. There is clearly still a long way to go, but the chances of not having a bill debated, reshuffled and passed through the Senate by summer next year are slim.

US Congressional Cap-and-trade Legislation

Bill & scheme	Scope, coverage, and launch date	Reduction target and cap	Auctioning & offset use	Pre-emption	Status & influence
Waxman-Markey American Clean Energy and Security Act (HR.2454, version approved by the House Energy and Commerce Committee on 21st May 2009)	▪ Nationwide ▪ 85% total US GHG emissions ▪ CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 & NF_3 ▪ 2012	▪ 17% below 2005 levels by 2020 ▪ 83% below 2005 levels by 2050 ▪ 2012 cap of 4,627 $MtCO_2e$, rising to 5,482 $MtCO_2e$ in 2016	▪ 15%+ of cap in auctioning; 35% of cap in free allocation to the power sector & 15% to industry ▪ Up to 2 billion offsets annually – 1 billion domestic & 1 billion international, with 1.5 billion international if 1 billion domestic not used	▪ Possible pre-emption of state & regional cap-and-trade post-2017 ▪ Provision of mechanisms to merge with federal scheme	▪ House Energy & Commerce Committee voted to pass bill to floor of House of Representatives on May 21st, where debate will continue. House Speaker Pelosi wishes to pass the bill from House by end of August.
Lieberman-Warner America's Climate and Security Act (Boxer amendments) (2008)	▪ Nationwide ▪ 80% coverage of emissions ▪ CO_2, CH_4, N_2O, HFCs, PFCs & SF_6 ▪ 2012	▪ 1990 levels by 2020 ▪ 70% below 1990 levels by 2050 ▪ 2012 cap of 5,775 $MtCO_2e$	▪ 51% auctioning in 2012 & 100% in 2036 ▪ 30% of allocation in domestic, international & forestry offsets or international allowances	▪ No pre-emption of state & regional cap-and-trade ▪ Provision of mechanisms to merge with federal scheme	▪ Negative Senate floor vote in June 2008. As most successful climate bill until Waxman-Markey, will have influence in Senate Environment & Public Works Committee & Senate. May be starting point for Senate debate.
Dingell-Boucher bill (2008)	▪ Nationwide ▪ 88% coverage of emissions ▪ CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3 ▪ 2012	▪ 6% below 2005 levels by 2020 ▪ 80% below 2005 levels by 2050 ▪ 2012 cap of 4,987 $MtCO_2e$ rising to 6,167 $MtCO_2e$ in 2017	▪ Different options for auctioning ranging from low levels up to 100% ▪ 5% of reduction requirement in offsets in 2012 & 35% in 2024	▪ Pre-emption of state & regional cap-and-trade ▪ Silent on mechanisms to merge with federal scheme	▪ Authored by two industrial and coal state Democrats, the bill could influence debate in House & on part of conservative Democrats. Discussion draft that never left committee.

Bill & scheme	Scope, coverage, and launch date	Reduction target and cap	Auctioning & offset use	Pre-emption	Status & influence
Markey Investing in Climate Action and Protection Act (iCAP) (2008)	▪ Nationwide ▪ 87% coverage of emissions ▪ CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 & NF_3 ▪ 2012	▪ 20% below 2005 levels by 2020 ▪ 85% below 2005 levels by 2050 ▪ 2012 cap of 6,098 $MtCO_2e$	▪ 96% auctioning in 2012 & 100% in 2020 ▪ 30% of allocation in domestic & international offsets or international allowances	▪ Silent on pre-emption	▪ Most ambitious bill attempt to date, authored by Rep. Markey who co-authored Waxman-Markey. Never left committee.
Bingaman-Specter bill (2007)	▪ Nationwide ▪ CO_2, CH_4, N_2O, HFCs, PFCs & SF_6 ▪ 2012	▪ 2006 levels by 2020 ▪ 60%+ below 2006 levels by 2050 contingent on international effort ▪ 2012 cap of 6,652 $MtCO_2e$	▪ 24% auctioning 2012-2017 rising to 53% in 2030 ▪ 10% of reduction requirement in international offsets ▪ Price cap of US$12 per tCO_2e in 2012 rising to US$23 in 2025	▪ Silent on pre-emption	▪ Could influence debate in the Senate. Senator Bingaman is Chairman of the Senate Energy & Natural Resources Committee. Never left committee.
Waxman Safe Climate Act of 2007	▪ Nationwide ▪ CO_2, CH_4, N_2O, HFCs, PFCs & SF_6 ▪ 2011	▪ 1990 levels in 2020 ▪ 80% below 1990 levels in 2050	▪ Unspecified level of auctioning ▪ Use of offsets not mentioned	▪ No pre-emption state & regional cap-and-trade ▪ Rewards early movers	▪ An earlier attempt at climate legislation. Authored by current Chairman of House Energy & Commerce Committee. Never left committee.
President Obama	▪ Nationwide	▪ 1990 levels by 2020 ▪ 80% below 1990 levels by 2050	▪ 100% auctioning from the start ▪ Limits on offset use	▪ Silent on pre-emption	▪ President Obama will push legislation forward and try to ensure that cap-and-trade provisions are not watered down.

Source: IDEAcarbon

Waxman- Markey bill (HR.2454 the American Clean Energy and Security Act of 2009, version approved by the House Energy and Commerce Committee on 21st May 2009)

Scope, coverage, and launch date	Reduction target and cap	Allowance allocation provisions	Offset use and early action	Pre-emption & market oversight
▪ Nationwide ▪ Covers 85% total US GHG emissions ▪ Assumes 2005 US emissions of 7.2 $GtCO_2e$ ▪ Covers CO_2, CH_4, N_2O, PFCs, SF_6 & NF_3 ▪ Separate target & cap for HFCs ▪ Scheme launches in 2012 ▪ Initially covers all electric power generators (downstream); & transport fuel producers that emit more than 25,000 $MtCO_2e$ (upstream) ▪ In 2014 industrial sources that emit more than 25,000 $MtCO_2e$ & sectors energy intensive join ▪ In 2016 natural gas local distribution companies join	▪ 3% below 2005 levels by 2012 ▪ 17% below 2005 levels by 2020 ▪ 42% below 2005 levels by 2030 ▪ 83% below 2005 levels by 2050 ▪ 2012 cap of 4,627 $MtCO_2e$, rising to 5,099 $MtCO_2e$ in 2014 & to 5,482 $MtCO_2e$ in 2016 ▪ 2020 cap of 5,056 $MtCO_2e$ ▪ 2030 cap of 3,533 $MtCO_2e$ ▪ 2050 cap of 1,035 $MtCO_2e$	▪ 15%+ of the cap in auctioning; proceeds go to low & moderate income families ▪ 35% of the cap to the power sector, equal to 90% of power emissions; 30% to local distribution companies & 5% to other power sector players; phase out between 2026 & 2030 ▪ 15% of the cap to energy-intensive, trade-exposed industry; phase out post-2025 ▪ 9% of the total cap to natural gas local distribution companies; phase out between 2026 & 2030 ▪ 2% of the cap to oil refiners from 2014 to 2026 ▪ 2% of the cap from 2014-17 for CCS & 5% thereafter ▪ 10% of the cap from 2012-15 for renewable energy end energy efficiency, 7.5% from 2016-17 , 6.5% from 2018-21 & 5% thereafter ▪ 5% of the cap from 2012-25 to prevent tropical deforestation and generate offsets, 3% from 2026-30 & 2% thereafter ▪ 2% of the cap from 2012-21 for domestic adaptation, 4% form 2022-26 & 8% thereafter ▪ 2% of the cap from 2012-21 for international adaptation and clean technology transfer, 4% form 2022-26 & 8% thereafter	▪ Up to 2 billion offsets allowed in the scheme each year ▪ 1 billion domestic & 1 billion international, with 1.5 billion international if 1 billion domestic not used ▪ Post-2017 international offsets would be worth 20% less than US allowances ▪ Focus on international forestry ▪ Early action credits limited until after EPA ruling on project eligibility ▪ CCX credits essentially prohibited	▪ Possible pre-emption of state & regional cap-and-trade post-2017 ▪ Provision of mechanisms to merge with federal scheme ▪ Carbon market oversight of the cash market by the Federal Energy Regulatory Commission (FERC) ▪ Carbon market oversight of the futures market by the Commodity Futures Trading Commission (CFTC)

Source: IDEAcarbon