



Latin Carbon Forum

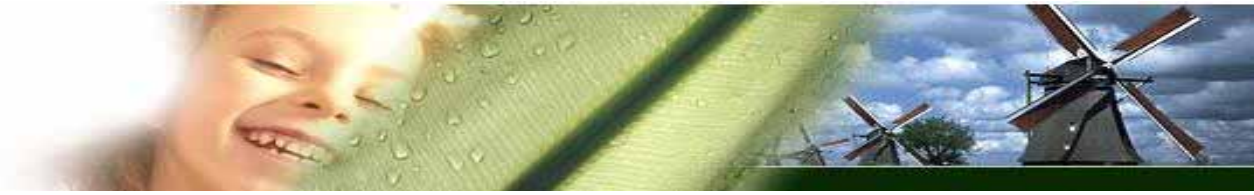
Panama, June 25 2009

Understanding CER price volatility

Cristián Retamal

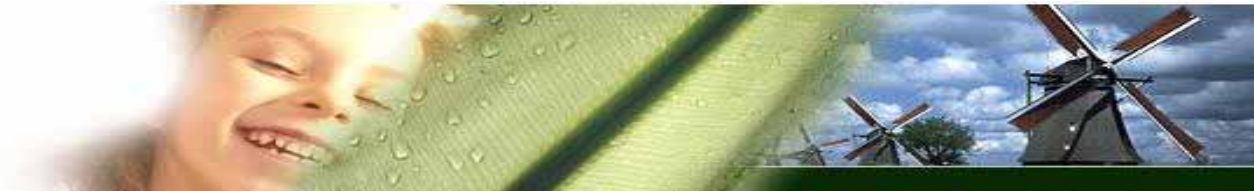
Carbon Management Consulting Group





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About CMC Group

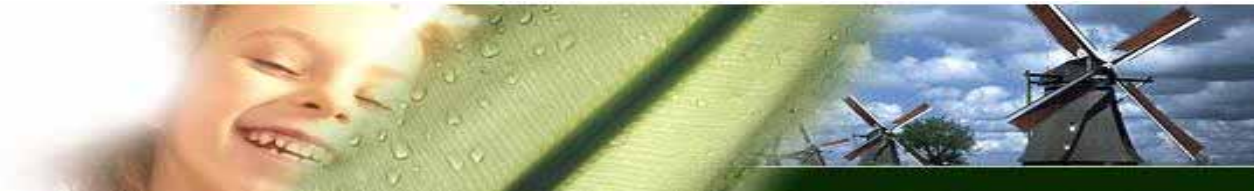
- Consulting firm specialized in the development of CDM/VER initiatives.
- With headquarter in Hong Kong we develop GHG mitigation projects in Latin America, Asia, and Africa.



- Permanent association with Capital Information Services (CIS)



Jointly we elaborate pricing options on forward CER prices within Kyoto I (2008- 012) and post-2012

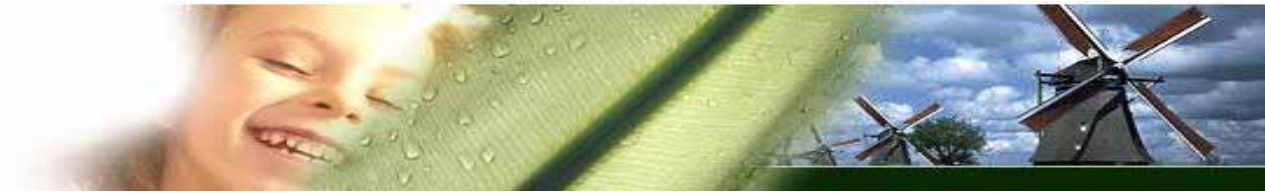


Combating Climate Change Globally

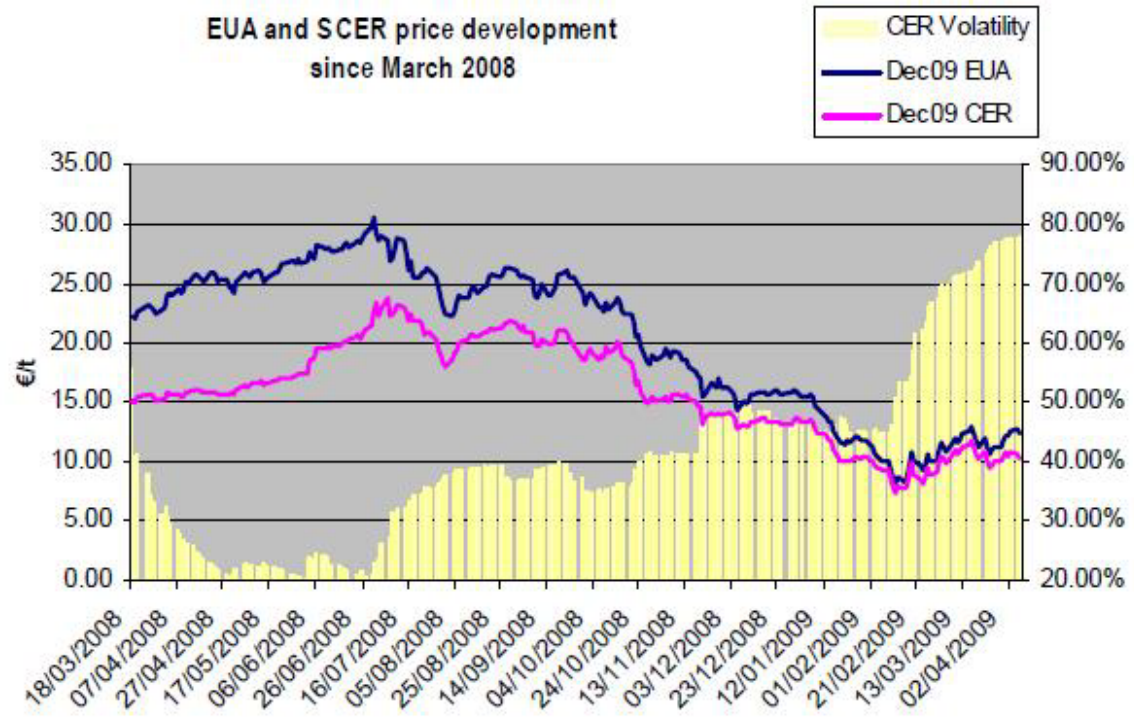
Command-and-Control or Cap-and-Trade?

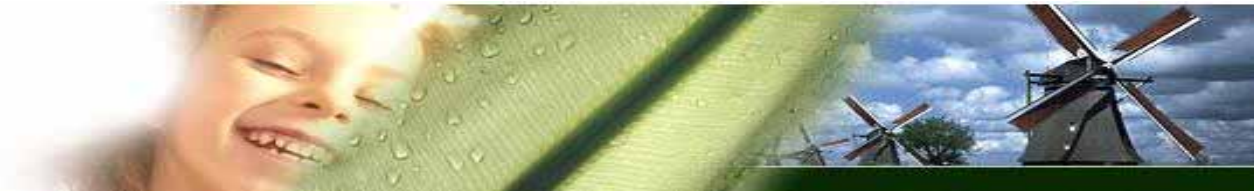
- Command-and-Control:
 - Carbon Tax or Standards
 - Government control is expensive and complex
 - Inefficient in some developing countries
- Cap-and-Trade:
 - Creation of carbon markets
 - Market incentive to reduce GHG emissions
 - Very high probability to meet reduction objective
 - Main problem: price volatility. Difficult to make the right decision when the future price of carbon credits is highly uncertain.





Price of CERs between March 2008 and April 2009

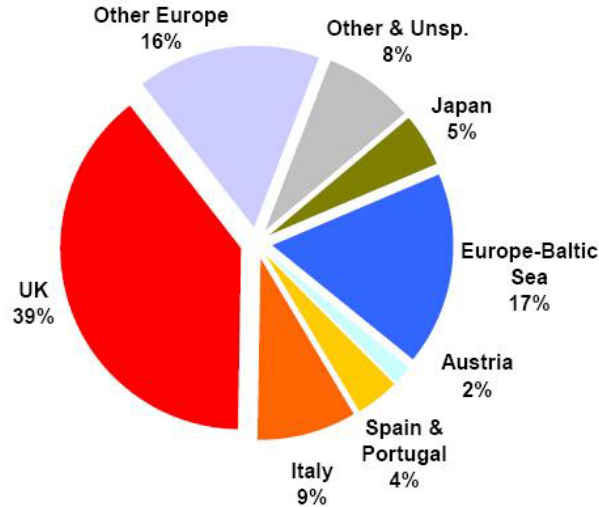




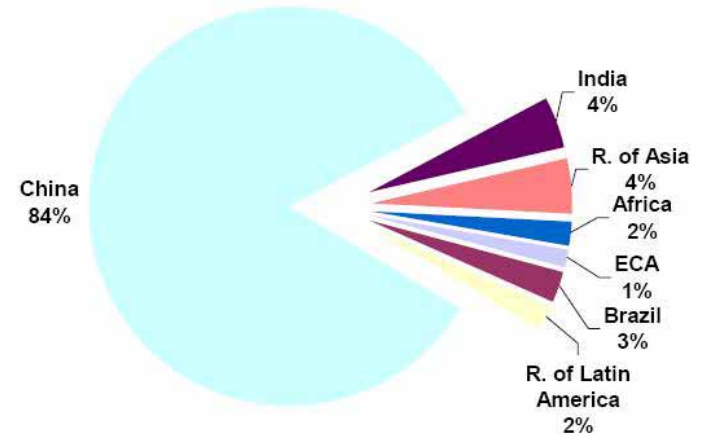
How to explain CER price volatility?

Carbon credits are a new type of immaterial commodity, highly dependant on political decisions.

Global demand versus global offer for carbon credits



Global demand: mainly EU, 80% (2008)



Global offer: mainly China, 84% (2008)



Source: The World Bank, May 2009



How to explain CER price volatility?

CERs demand depends largely on EU ETS offsets acceptance for meeting targets.

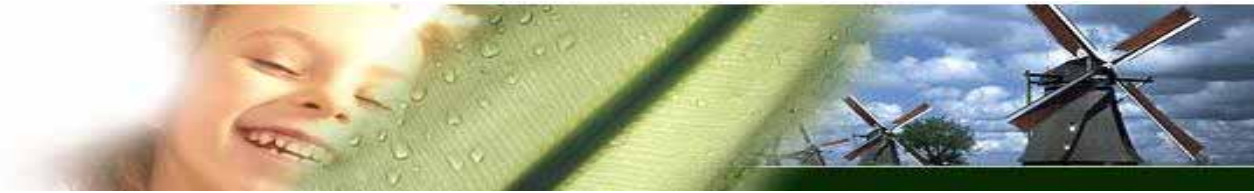
Global economic downturn has impacted EU installations, generating lower overall emissions, and then an easier road to Kyoto compliance for Annex I parties.

Hence, EU installations have reduced their needs of contracting Certified Emission Reductions for the period 2008-2012, reducing then the demand.

European compliance buyers were short of liquidity and sold massively EUAs (that were obtained for free)

In addition to this, a first notable AAUs transaction has occurred from EITs actors who sold their allowances against the need of cash during the economic storm, reducing then any 2012 potential carbon credits demand.

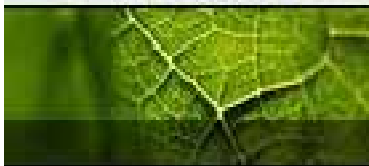
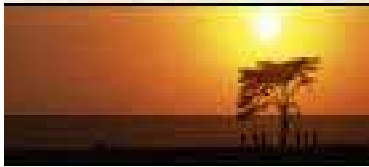
Reduction of outputs → Reduction of GHG emissions → Reduction of carbon credits demand

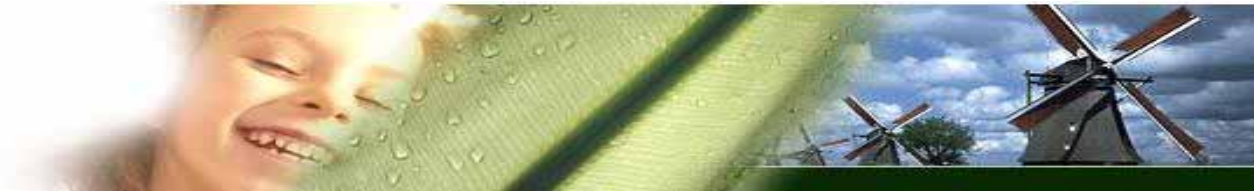


How to explain CER price volatility? (continue)

Developers assessing their CERs potential should not only pay attention to their own projects advantages and risks, they must pay keen attention to carbon prices macro drivers:

- Allowances allocations in parties with GHG reduction commitments.
- Links with the EU ETS demand, therefore between CERs/EUAs prices and the economic fluctuations of the buyers
- Factors such as fuel prices (coal-gas) and even European weather influence EUA prices and therefore CER prices.
- Political decisions at various levels. COP/MOP provides positive and negative signals to the carbon market.



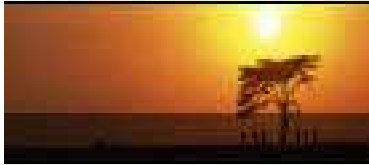


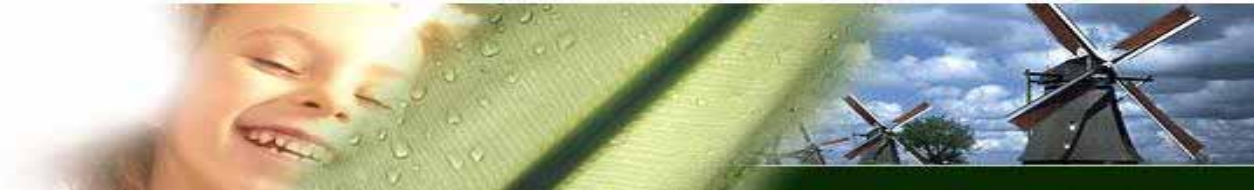
Which would be an equilibrium price?

Carbon markets are largely imperfect and largely to remain so for some time; but certainly the so called flexible mechanisms (CDM, JI and Emissions Trading) are commonly considered as the best tools to mitigate climate change.

First to be considered is that delivery risk has a huge impact in forward CERs transactions. Differences between good projects and “not so good projects” could be as high as Euro 3 to 4.

Hence is very important for sellers to know which is the correct price for their CERs. Here is when rating reports acquire great importance.





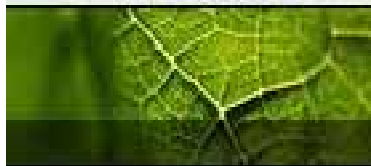
Which would be an equilibrium price? ... (continue)

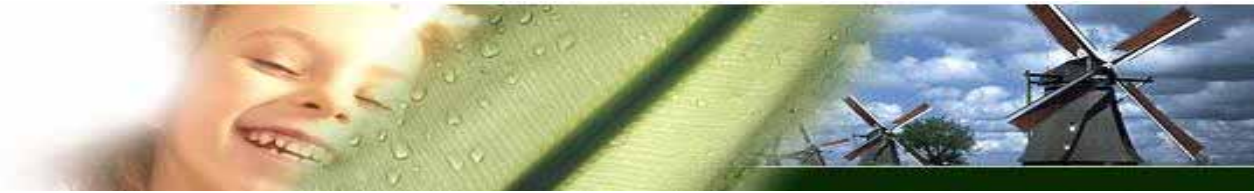
If prices of carbon credits remain low, polluters of Annex I could be tempted to purchase carbon credits in the markets instead of implementing green measures in their own plant or factory. Similarly, any polluter of Annex II country will be less interested in developing low-carbon initiatives if the expected financial income for doing so is not sufficiently rewarding. Hence the need for a reasonable price level for carbon credits.

Internationally, the easiest way to quick reduce GHG emissions is to reduce consume of fossil fuels, or at least to promote the use of the cleanest fossil fuels.

Post-Kyoto negotiations seek to reduce to its minimum the use of coal, which is by far the worst source of energy.

Most thermal power plants (and many other industries) can run either on coal or natural gas (NG). Then, the decision to use either coal or NG depends on its prices. When NG is to expensive, power plants will switch to coal.





Which would be an equilibrium price? ... (continue)

The use of coal also implies to buy carbon credits as a compensation of GHG emissions, increasing then artificially the price of coal.

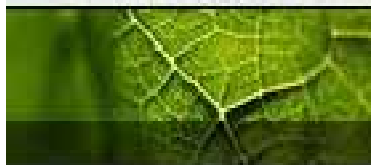
After several years of experiment in Europe, it's known that carbon price must be sufficient high to bring a positive environmental impact.

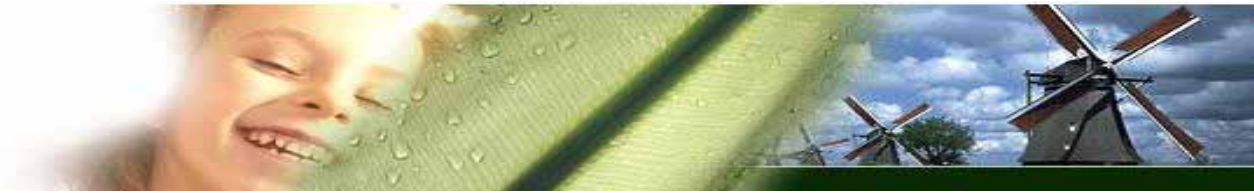
It is now established that if the price of carbon credits remains under EUR 25 to EUR 30, coal remains more attractive than NG.

Higher prices of oil and NG increment the prices of carbon offsets.

Decisions makers are aware of the benchmark.

It is CMC's Group view that whatever the decisions on the future of carbon credits, it seems very likely that policy makers will try and ensure that the supply and demand balance will maintain the integrity of the incentive angle of carbon credits.





How to protect against CER volatility?

Which would be an adequate carbon finance strategy?

selling forward or spot?

Certainly those who sold at spot prices a year ago had good luck taking the crest of the wave, but recently carbon markets have shown its volatility.

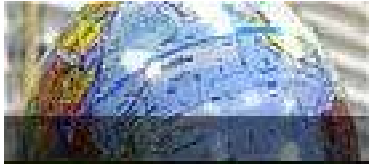
Then the decision depends largely on the risk aversion.

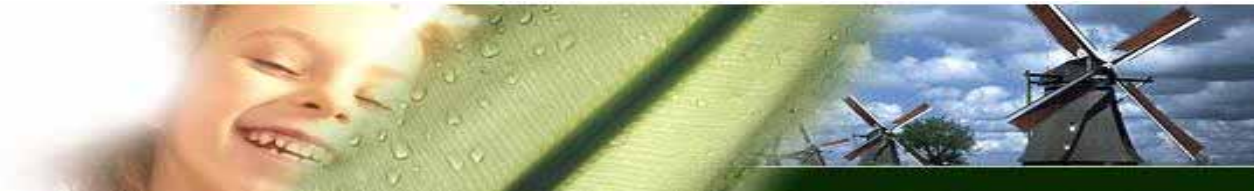
Forward transactions are a good way of securing minimum incomes.

There exist plenty of methods and clauses to secure floor prices indexing ERPAs to spot prices with or without guaranteed delivery.

Rating reports from specialized agencies are a sophisticated and useful tool to obtain better prices for your CERs.

Therefore, to optimize the carbon finance incomes it is a need to count with a safe trading strategy. Project proponents should design their strategies according to their needs and along with a carbon trading expert.





Prices in a post-2012 period

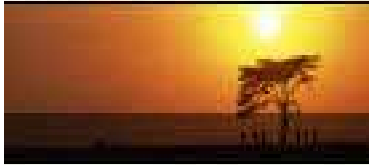
It is quite difficult to determine CER price in the coming years.

It is very likely that under a benchmark of EUR 30, the global carbon-constraint economy will fail to substantially reduce its GHG emissions.

Prices will likely remain volatile due to financial speculation and probable regulation mistakes.

Nevertheless carbon markets are young and still under construction. Stability should be gained over the long term when rules are correctly set and regulators better prepared to correctly tame price volatility.

Current prices for post-2012 are among Euro 5-9 for forward bases transactions (without delivery guarantee) in projects that start generating in Kyoto I, but these shall fluctuate depending on political negotiations.



Prices in a post-2012 period

CMC Group views on a coming post-Kyoto period

Average price range for a CER (or its equivalent) on the Spot market between 2013 and 2020	Probability	Justification and Comments
Euro 0 -10	15%	<ul style="list-style-type: none"> - Post-Kyoto regulations could fail or be delayed - Project based mechanisms (CDM) may be abandoned - Overflow of the market due to REDD - Linking of existing carbon markets into a globalized market could fail
Euro 10 – 20	10%	<ul style="list-style-type: none"> - Price range is not sufficient to have a real impact on main industrial decision makers. - If prices remain in this range, we would expect regulatory decisions from the UNFCCC in order to “rectify” the supply.
Euro 20 – 30	35%	<ul style="list-style-type: none"> - It is the most likely price range for CERs (or their equivalent) for 2013-2020 - It would be a fair level to properly initiate a carbon-constraint economy, even if probably too low, especially if the prices of oil and gas start to increase again in the same period. - Regulators will probably try to stick to this price range, at least during the 2013-2016 period.
Euro 30 – 40	25%	<ul style="list-style-type: none"> - Probably the required price to significantly mitigate greenhouse gas emissions. - Regulators will probably try to stick to this price range, at least during the 2017-2020 period. - Such price range looks even more likely if Annex I countries (or their equivalent under Kyoto II) do not overly limit the use of CERs for target meeting
More than Euro 40	15%	<ul style="list-style-type: none"> -The market could turn out to be short, for instance if demand cannot be met if the adopted targets are too tight. - Speculations on the carbon price could push CER price high - Risk of a negative impact on economic growth would be high, with lower expected greenhouse gas emission bringing carbon prices back to lower levels -As last remedy, “hot air” (Ukraine and Russia essentially) could possible be used to control carbon prices or allowances of future crediting years be auctioned .

Conclusions

- Carbon markets are influenced by several drivers that confront short term views of financial markets with principles of long term nature conservation.

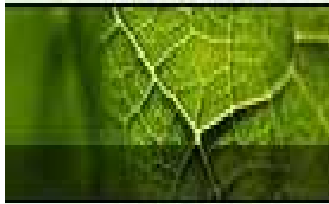
- Project proponents with CERs to sell must develop a carbon strategy along carbon markets experts to optimize their participation in carbon markets.

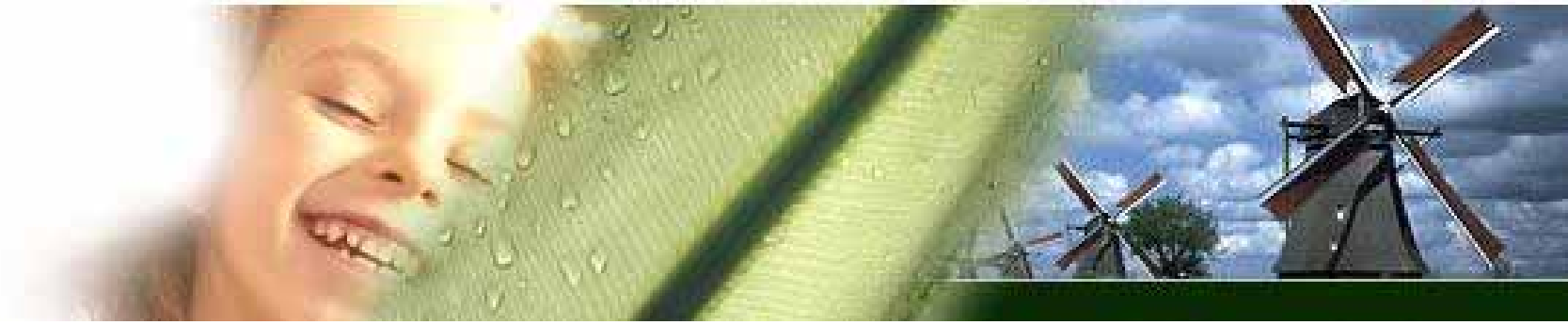
- Structured ERPAs with indexed prices are good tools to secure minimum carbon incomes.

- Sophisticated rating reports on emission reduction initiatives are a useful tool for sellers to know the correct prices for their CERs.

- The carbon community is expectant on the international negotiations for a post-2012 period.

- Nevertheless we clearly observed a growing interest for post-2012 CERs. As a result of the growing demand and also due to the confidence in a positive outcome of the post 2012 negotiations, prices of post-Kyoto CERs are coming closer to the price of Kyoto I CERs. We can expect this trend to continue in the coming months.





Thanks for your attention!

Carbon Management Consulting Group

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