



REUTERS/ Jason Lee

---

# Logical Framework for developing emissions trading schemes in Economies in Transition

---

A discussion document for stakeholders in the PETER Project  
(Preparedness for Emissions Trading in the EBRD Region), a project  
sponsored by the European Bank for Reconstruction and Development  
(EBRD)

[www.ebrdpeter.info](http://www.ebrdpeter.info)

By

**THOMSON REUTERS POINT CARBON**

## ABOUT POINT CARBON

Based on research on environmental, energy and resource management politics at the independent Fridtjof Nansen Institute in Norway, Point Carbon was established in 2000 and has since pioneered in providing services in the carbon and energy markets. The company has grown and matured along with the rapidly developing global environmental markets. Starting with an office in Oslo, Point Carbon now has offices established in Beijing, Kyiv, Malmö, London and Washington D.C, with additional international offices planned. Late May 2010, Point Carbon was acquired outright by Thomson Reuters, the world's leading source of intelligent information for businesses and professionals. This acquisition provides access for Point Carbon to a wide range of data and corporate resources that will enhance our services as well as connect us to a wider client and distribution network for our services.

With over 30 000 clients worldwide, Point Carbon is uniquely positioned as the world's leading provider of independent news, analysis and consulting services for European and global power, gas and carbon markets. Point Carbon's in-depth knowledge of power, gas and CO2 emissions market dynamics, positions it as the number one supplier of market intelligence. With clients in over 150 countries, including the world's major energy companies, financial institutions, international organizations and governments, Point Carbon provides its clients with market-moving information through monitoring fundamental markets, key market players and business and policy developments. Reports are also translated from English into Japanese, Mandarin, Portuguese, Polish, French, Spanish and Russian. Point Carbon presently employs around 200 specialists, including experts on international and regional climate policy and regulations, mathematical and economic modelling, forecasting methodologies, risk management, technical project knowledge and price discovery. Point Carbon also runs a number of high-level networking events, conferences, workshops and training courses.

## POINT CARBON ADVISORY

Point Carbon Advisory currently numbers around 15 people based in Oslo, London and Washington D.C. The department delivers bespoke, fully independent consultancy and multi-client studies to governments and companies in all corners of the world. The department capitalizes on Point Carbon's world class databases, models, networks and teams of highly skilled analysts covering carbon, energy, corporate strategy, finance and economics. These assets uniquely position Point Carbon Advisory to meet clients' needs for customized and in-depth analysis on a wide range of carbon and energy issues. Advisory Services took off as the major provider of bespoke strategic advice by delivering "multi-client studies" on European and global emissions trading back in 2003. The high quality of the work provided by Point Carbon Advisory has been widely recognized internationally. At the Energy risk awards 2010 it received the Advisory firm of the year award.

This report is one in a series intended for informational purposes. News, reports and other informational resources are freely available at the PETER project website: [www.ebrdpeter.info](http://www.ebrdpeter.info).

The PETER project is being delivered for the EBRD by a consortium of partners led by Thomson Reuters Point Carbon. The other partners are Carbon Limits, Baker & McKenzie and Climate Change Coordination Centre, Kazakhstan.

Main author:

Olga Gassan-Zade, Thomson Reuters Point Carbon

Prepared for:

Jan-Willem Van de Ven and Grzegorz Peszko, EBRD

December 2012

# TABLE OF CONTENTS

INTRODUCTION.....	1
1. STEPS TOWARDS TRANSITION TO CARBON MARKET .....	1
2. ASSESSMENT OF THE RATIONALE FOR THE ETS .....	2
3. CHOICE OF POLICY OPTIONS AND PRINCIPLES OF THE ETS.....	2
4. ESTABLISHMENT OF THE TECHNICAL FRAMEWORK FOR THE ETS .....	3
5. ESTABLISHMENT OF ETS INSTITUTIONAL & LEGAL FRAMEWORK.....	5
6. FROM PILOT MARKET TO MARKET MATURITY .....	6
7. TIMING OF THE STEPS OF THE LOGICAL FRAMEWORK.....	6

# INTRODUCTION

The *Logical Framework* for analysis of transition pathways to carbon markets describes the necessary technical, policy, and institutional elements required for the development of a market design concept and its transformation into an operational market. In the case of emerging emission trading schemes (ETSs), application of the Logical Framework can be used to determine the specific stage of the development of the ETS and steps that would be further required to make it operational and ensure its effectiveness.

## 1. STEPS TOWARDS TRANSITION TO CARBON MARKET

An overview of market readiness pathways prepared by OECD<sup>1</sup> recognizes five broad steps that a country needs to move forward towards an ETS. These are:

- 1) Assessment of the country's mitigation potential and cost of achieving it,
- 2) Assessment of the feasibility and choice of specific policy instruments (e.g. a cap-and-trade scheme),
- 3) Establishment of the necessary technical framework for the functioning of the market,
- 4) Corresponding adjustment of the regulatory framework, and, finally,
- 5) Piloting a market mechanism.

The first two steps in this framework deal with determination of the rationale for the introduction of a domestic ETS in the context of the national climate policy and national climate change mitigation objectives. Comparative assessment of the various climate policy options and the choice between them is invariably a reflection of the general political context and the overall policy direction in the country.

Particularly it concerns the issue of transition to carbon markets. Observation of the progress and process of the development of ETSs globally suggests that one of the critical elements required for the pathway to carbon markets is harnessing political will, which should be recognized an essential precondition.

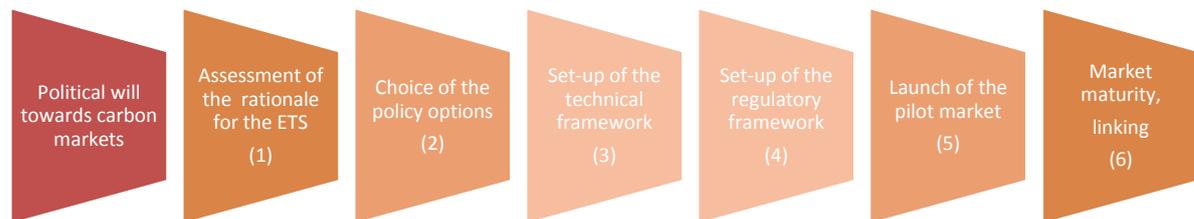
Taking the OECD framework as a point of departure, the Logical Framework presented here focuses on the process of setting up a domestic carbon market assuming pre-existence of national climate policy goals and a political decision or, as a minimum, an expressed political will to consider carbon pricing as a policy tool. Expanding on OECD framework, we also recognize that market building does not stop at the phase of launching a pilot market. The example of the European Union Emissions Trading System (EU ETS) demonstrates that the completion of the pilot phase does not necessarily bring about a mature market and that several market interventions might be needed before the market can achieve maturity. Finally, we consider linking to international markets as the crowning stage of a domestic market, enabling full realization of its potential as a policy instrument.

Figure 1 below presents a graphical representation of the essential steps required in setting up a domestic carbon market, each of which is explained in more detail below.

---

<sup>1</sup> André Aasrud (IEA), Richard Baron (IEA), Katia Karousakis OECD, Market Readiness: Building blocks for market approaches. OECD/IEA 2011

Figure 1. Steps towards establishment of the carbon market



## 2. ASSESSMENT OF THE RATIONALE FOR THE ETS

Assessment of a country's mitigation potential, as well as the cost and potential effectiveness, appropriateness and feasibility of various policy approaches, serves as a foundation for the selection of sector-specific climate change policies, including carbon pricing. Careful consideration of the implications of introducing a domestic ETS as an instrument in the implementation of national climate policy goals and the role the ETS might play in achieving them is a necessary prerequisite to corresponding policy decisions. As a basis, such analysis should include:

- Assessment of the rationale for the ETS,
- Assessment of ETS options, mitigation and price scenarios,
- Assessment of the feasibility of the ETS, analysis of the possible barriers and ways to overcome them.

The policy review might be government-led or can develop as a result of political or legislative initiatives. Most notably, opportunities to conduct policy review in the US were a result of legislative initiatives. Among the EBRD focus countries, Ukraine followed the US example in initiating the ETS assessment as a result of a legislative initiative.

As part of the process of prioritization of the national mitigation actions, the assessment of the rationale for introducing the ETS should include analysis of the drivers of emissions, mitigation costs and potential emission reductions across different sectors now and in the future. This information serves as a basis for the identification of priority sectors for the carbon market. Further assessment of the feasibility of implementing the ETS in the prioritized sectors would be required to establish appropriateness of their inclusion in the ETS and could include issues concerning the characteristics of the sector (competitive, a monopoly, or regulated), number of sources sufficient to provide liquidity and their characteristics (mobile/stationary, multitude of dispersed sources vs few large sources), feasibility of data collection, enforcement, transaction costs, and potential international competition effects.

## 3. CHOICE OF POLICY OPTIONS AND PRINCIPLES OF THE ETS

The policy framework begins with a clear policy decision regarding the introduction of a domestic carbon market. Policy choices also determine the mitigation pathways and overall economic impacts of the scheme, as well as policy priority and objectives of the ETS. These choices might deal with:

- Overall environmental goal of the ETS (setting and adjusting the cap),
- Scope and coverage of the ETS,
- Anticipated carbon price in the scheme and possible price containment mechanisms, such as the use for compliance of offsets,
- Acceptability of the level of costs to participants associated with running the ETS,
- Acceptability of the economic impacts on affected sectors and the country of implementing the ETS,
- Guiding market principles (e.g. scarcity, environmental integrity, market oversight, etc.),
- Pre-requisites for introduction of the ETS, if any,
- Schedule for implementation of the ETS, including determination of pilot and trading periods,
- Potential synchronisation with existing or proposed market mechanisms, such as energy efficiency or renewable energy,
- Development of domestic offset schemes, offsets from which could be used in the ETS,
- Interaction with already existing policy instruments, e. g. incentives for the use of renewable energies or enhancing energy efficiency,
- Flexibility of the ETS design for future linking potential.

Many of the issues requiring higher-level policy decisions arguably also form part of the technical basis for the operation of a domestic carbon market and could be seen as essential technical elements making up the design of an emissions trading scheme. This particularly concerns decisions relating to the handling of impacts on internationally exposed industries and ensuring minimization of social effects (e.g. electricity price hikes), which affect the choice of the sector coverage of the scheme and level of ambition in covered sectors.

Some of the fundamental principles guiding the design of the scheme, such as scarcity, the need to ensure environmental integrity, market credibility and openness to international markets are also ultimately policy decisions that are at a later stage reflected in the formulation of technical and legislative foundations of the scheme.

#### 4. ESTABLISHMENT OF THE TECHNICAL FRAMEWORK FOR THE ETS

After the major policy decisions have been made, a set of technical components must be developed to ensure the functioning of the market. These are:

- Collection of the initial entity-level or installation-level data,
- Determination of allocation approaches and actual distribution of allowances,
- Any further technical decisions regarding the design of the ETS,
- Set-up of the monitoring, reporting and verification (MRV) system,
- Set-up of the registry,
- Design of the market oversight system.

The first and the most critical item on the list of technical components that requires development is **data collection**. As the example of the pilot phase of EU ETS shows, robust historical emissions and output installation-level data are key input for decisions on the number of allowances to be created. The data needs to cover at least several years to allow identification of reliable emission trends or be established through a pilot phase where participants' emissions are monitored, reported and verified.

Selection of **methodologies of allowance allocation** and the actual **allocation of allowances** is the next technical step in the establishment of an ETS. This could include the choices between absolute or intensity-based allocation, grandfathering or auctioning as a method of distribution, definition of the reference years, provisions for early actions, treatment of new entrants, etc.

Similarly, to the extent not determined in the initial policy decision step, the technical framework for the ETS should also finalize **remaining ETS design options**, such as defining the thresholds of sources, opt-in and opt-out provisions, provisions for inter-temporal flexibility, and the rules on the use of offsets, including domestic offsets if such are to be introduced.

A robust and transparent **MRV** system is one of the most critical elements of the technical framework for ETS. It functions both as a tool for monitoring compliance by ETS regulators and as a system providing assurance to the market participants in the environmental integrity and credibility of the market. Among the technical elements that would need to be developed as part of the MRV system are:

- Monitoring and reporting guidelines,
- Sector-specific methodologies,
- Reporting procedures, including data format specifications, the deadlines for submission and penalties for late and incorrect submissions,
- Verification protocols,
- Verifier accreditation rules and procedures,
- Data archiving and storage guidelines,
- Provisions for public disclosure and treatment of confidential data.

Should the ETS be designed for potential linking with other ETSs, ensuring that ‘a tonne is a tonne’, regardless of the system in which it is measured, is the primary concern for harmonization of the MRV of the linked schemes.

Lastly, the MRV system can also play a role in the collection of installation/entity level emissions discussed earlier. If data is not readily available for the development of the national allocation plan (NAP), the MRV system can be implemented ahead of the ETS to enable data collection, provided that the ETS implementation timelines allow sufficient time for its introduction ahead of the launch of the first ETS phase. Robust MRV systems are in place and can be adopted with modifications with relatively little effort.

Another key part of the ETS’s technical infrastructure is the allowance **registry**, which is necessary to enable transactions among entities inside a country, track allowance holdings, surrender allowances, and record domestic transactions between market participants that take place during a trading period. The registry allows the ETS regulators to reconcile emission levels reported by companies with the number of allowances held for a particular compliance period, thus determining whether the participants are in compliance.

Where the use of domestic offsets is permitted, the registry can be used to administer their issuance and to track their use and accounting. Similarly, the registry may be used to provide functionality for tracking the trading in international offsets and/or international allowances from linked schemes if the ETS design anticipates their use. Compatibility of registries and registry protocols may need to be ensured to facilitate the exchange of units between the registries of linked ETSs.

The following is an approximate list of the technical elements of the registry that would need to be put in place to ensure its operation:

- Registry rules and procedures,
- Appropriate software and hardware,
- Specific data exchange protocols,
- Provisions for ensuring registry security, data confidentiality, etc.

As with MRV systems, established registry software and protocols exist and are available to for adoption by new ETSs.

Finally, ETS regulators need to develop safeguards to ensure the environmental integrity of the system, as well as the integrity of the trading infrastructure. This can include the development of specific **market intervention** rules and technical provisions concerning **market oversight**.

- Market intervention can come into use when the market is failing its purpose and a regulator's intervention is required to deal with issues threatening the market's environmental integrity, e.g. unforeseen overallocation, unexpected consequences of linking to other schemes or offset mechanisms, etc.
- Market oversight envisages both technical and legal provisions ensuring proper governance of the scheme and preventing market abuse, such as insider trading, market manipulation or fraud.

## 5. ESTABLISHMENT OF ETS INSTITUTIONAL & LEGAL FRAMEWORK

The operationalisation of the technical framework described above requires clear **legal basis** establishing the policy and technical elements of the ETS through a set of laws and regulations. The regulatory framework underpinning the ETS must sufficiently cover all elements of the system, defining the basic functionality of the ETS, providing legal framework for the choice of ETS design options, clearly assigning the roles and responsibilities of the institutions and stakeholders involved in the operation of the market, and setting up a credible enforcement system. Pure legal issues that need to be resolved include:

- Definition of market participants,
- Definition of the legal nature of carbon trading units,
- Tax and accounting treatment,
- Procedures for enforcement and penalties,
- Harmonisation with existing complimentary laws.

The technical set-up of the MRV system should also be transposed into a robust legal framework to provide confidence to market participants (and stakeholders) that emissions are adequately monitored, reported and verified. Procedures for enforcement and penalties would need to be defined in the legal framework to ensure appropriate actions are taken against cases of non-compliance.

Clear legal and regulatory environment is also important for the enforcement of market oversight and governance. Regulations concerning market transparency, the supervisory powers of the regulators, and specific provisions restricting market abuse and manipulation would need to be integrated into the ETS legal framework.

A robust ***institutional framework*** assigning clear roles and responsibilities for the functioning of the market among the regulators, supporting institutions, market participants, and third parties such as verifiers should be also stipulated by the set of laws and regulations governing the ETS. The institutional framework should define and assign regulatory and technical responsibilities for:

- Collecting and compiling emissions data,
- Overseeing and carrying out verification of installation level emissions and activity data,
- Issuing emission allowances,
- Issuing domestic offsets, if anticipated by the ETS design,
- Performing market oversight activities,
- Assessing and enforcing compliance with the ETS's provisions and regulations.

While providing the legal definition of the institutional roles, the institutional framework should ensure that provisions are laid out to facilitate effective interaction among various regulatory bodies and between the regulatory bodies and the private sector, while distinguishing their spheres of responsibility.

Apart from purely legal and regulatory aspects, for the institutional framework supporting the ETS to be effective, the issues of institutional capacity must also be addressed. Some responsibilities can be assigned to existing bodies, whereas others may require the creation of new structures or bodies. In both cases, the tasks and responsibilities assigned are likely to present new challenges due to the innovative nature of carbon markets as policy mechanisms. To adequately ensure the functioning of the markets, the regulatory bodies involved in overseeing them should have appropriate levels of capacity, secured by adequate budget allocation, staffing and training.

## **6. FROM PILOT MARKET TO MARKET MATURITY**

No matter how carefully the regulators approach the design of the ETS, it is hard to foresee every eventuality. For this reason, the phase-in of an ETS should preferably start with a trial or pilot phase in which the stability of the system and its effective operation can be tested, while both the regulators and the market participants accumulate experience with the ETS.

If necessary, adjustments of the scope, stringency, allocation rules, and other technical and legal elements of the ETS can be implemented on completion of the pilot phase. As the ETS matures from pilot into a fully fledged trading scheme, linking with other ETSs may become a possibility. The work on securing linking provisions and protocols can start in the pilot phase of an ETS, to be implemented after its completion.

## **7. TIMING OF THE STEPS OF THE LOGICAL FRAMEWORK**

The Logical Framework is presented as a succession of steps, yet the timing of implementation of particular elements will vary from ETS to ETS depending on existing policy processes, local conditions, and progress with stakeholder consultations.

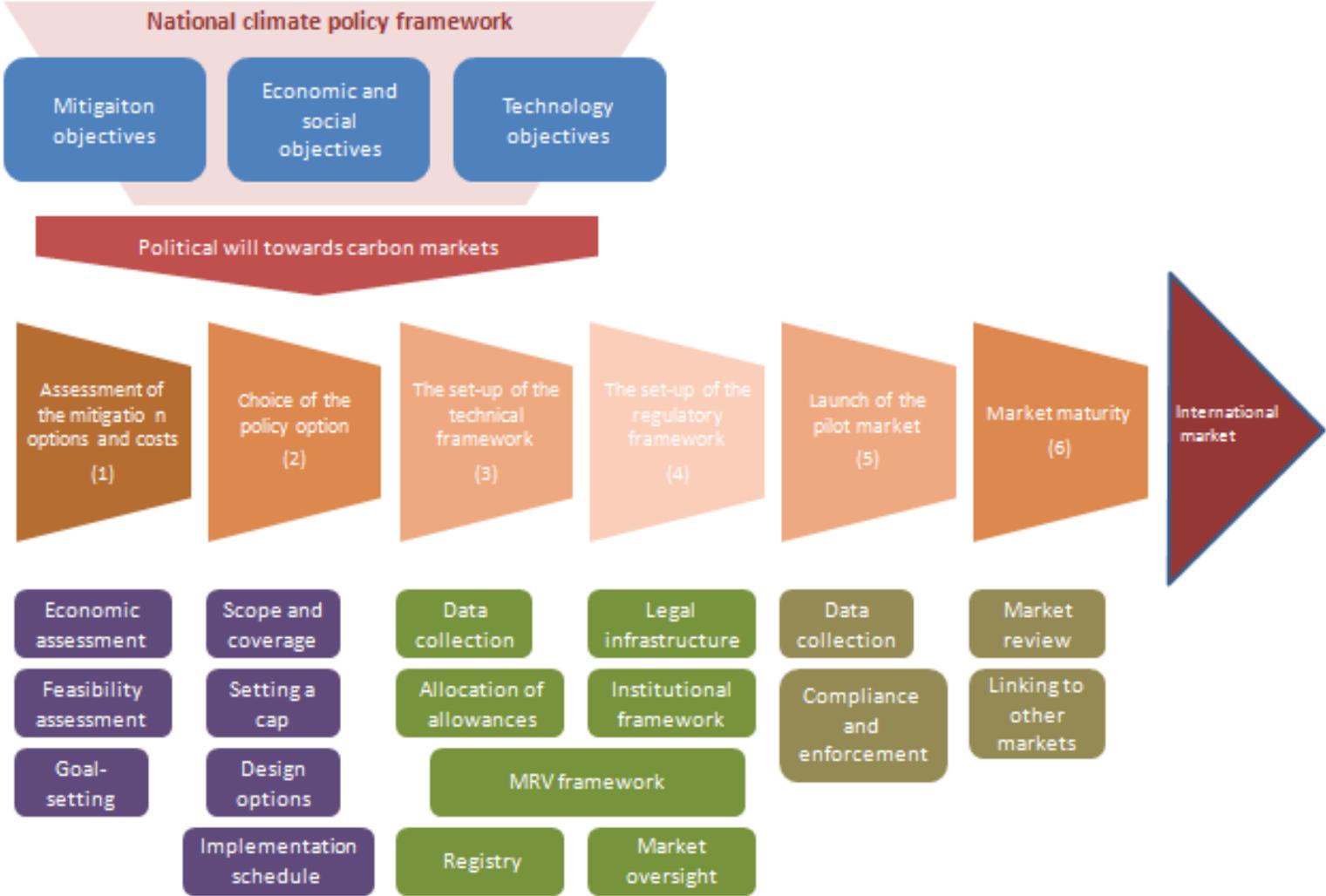
The elements required for the functioning of an ETS will be largely determined in Steps 3 and 4. However, some of the elements making up the ETS might be spread out over time. For example, data collection can start as soon as there is

political will, as a precursor to assessment of emissions trading as a possible option in the implementation of national mitigation goals.

Furthermore, it is not always possible to separate the development of the technical and policy building blocks of the ETS as choice between some of the elements of the design of the ETS that might appear technical in nature require fundamental policy decisions. This concerns primarily elements such as the market cap, scope and coverage of the ETS, methods of allocation, decisions on the use of international and domestic offsets.

At the same time, some of the elements combine both technical and legal characteristics and might progress through successive drafting exercises rather than technical discussion of options. This primarily concerns issues regarding the set-up of the ETS's MRV system as well as the establishment of compliance and market oversight provisions.

Figure 2. the Logical Framework for developing emissions trading schemes in Economies in Transition



## Copyright and Disclaimer

Neither this report nor any part thereof, including, without limitation, opinion, advice or recommendation contained therein, is intended to constitute specific technical, financial, commercial or legal advice and nothing therein purports in any manner to replace professional advice. No express or implied warranties are made with regards to this report, and there are no third party beneficiaries thereof. Neither the European Bank for Reconstruction and Development, Thomson Reuters Point Carbon, nor any of their directors, officer, employees, shareholders or agents can be held liable for any errors, omissions or inaccuracies this report may contain. This report does not necessarily represent the view of the European Bank for Reconstruction and Development.

This report contains information proprietary and/or confidential to Thomson Reuters Point Carbon. All rights in such material are reserved and may not be reproduced, published or summarised for distribution without the prior written consent of Thomson Reuters Point Carbon. This report has been prepared for the European Bank for Reconstruction and Development (“Client”). Any other party seeking to rely on this report does so at its own risk and Thomson Reuters Point Carbon takes no responsibility for any losses it may incur as a result. While Thomson Reuters Point Carbon considers that the information contained, analysis presented and opinions expressed are all sound, Thomson Reuters Point Carbon makes no other representation or warranty, expressed or implied, including that the report is error-free or is fit for a particular purpose.

The statements and opinions expressed in this report are given in good faith and in the belief that such statements and opinions are not false or misleading at the date of this report. Thomson Reuters Point Carbon has no reason to believe that the source data is unreliable but there exist possibilities for error and difference of opinion.

This report and the data provided in this report prepared by Thomson Reuters Point Carbon are provided for information purposes only. Thomson Reuters Point Carbon does not offer or encourage any person to buy or sell or solicit offers to buy or sell any financial instrument or offer recommendations to purchase, hold or sell any commodity or make any other investment decision.

Elements of the report may be based on extrapolated calculations and are prognoses and opinions and must be interpreted as such. All persons must rely on their own judgement when using the report. To the fullest extent permitted by law, Thomson Reuters Point Carbon does not accept or assume responsibility to anyone other than the Client (and then only to the extent agreed in writing) and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in accordance with this report. Any decisions made on the basis of this report are the responsibility of the person making that decision.

**BY ACCEPTANCE OF THIS DOCUMENT, THE RECIPIENT AGREES TO BE BOUND BY THE AFOREMENTIONED STATEMENT.**

*Copyright © 2012, by Thomson Reuters Point Carbon*