

The Carbon Market



ICE ECX Carbon Contracts:
Opportunities in European Emissions Market



European Climate Exchange

July 2010



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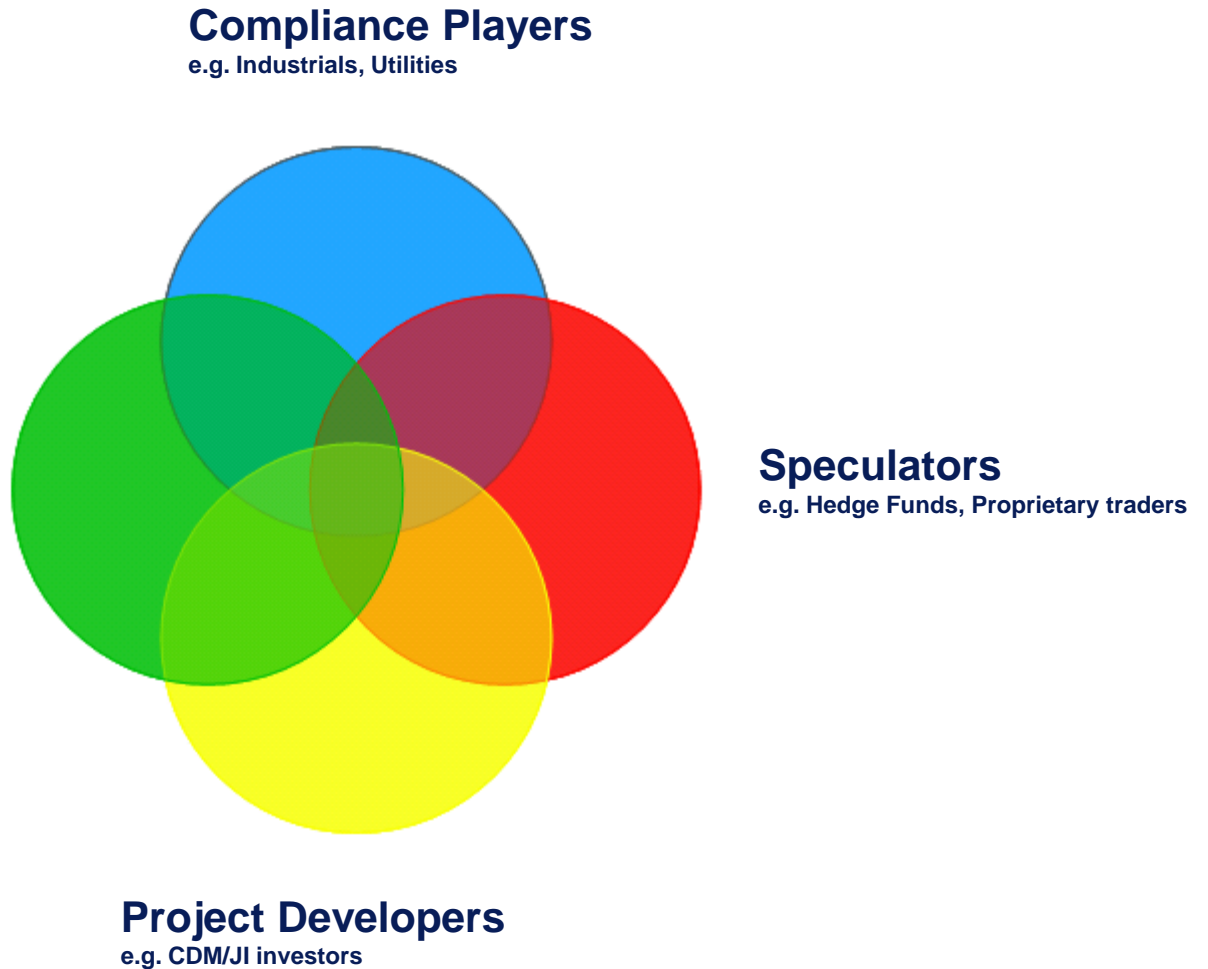
Why are we trading CO₂ in Europe?

- Every year, 30 billion tonnes of carbon dioxide (CO₂) is pumped into the atmosphere globally (Europe: 5 billion tonnes)
- Kyoto Protocol cuts 5% from 1990 levels by 2012 through market mechanisms:
 - Emissions Trading 'cap-and trade'
 - CDM (Clean Development Mechanism)
 - JI (Joint Implementation)
- EU Emissions Trading Scheme (EU ETS)
 - Begun 2005, runs in phases which gradually reduces emissions
 - Targets European power generators and heavy industry
 - 12,000 installations covered
 - 1 EU Allowance (EUA) equals 1 tonne of CO₂
 - Annual verification of emissions output in April



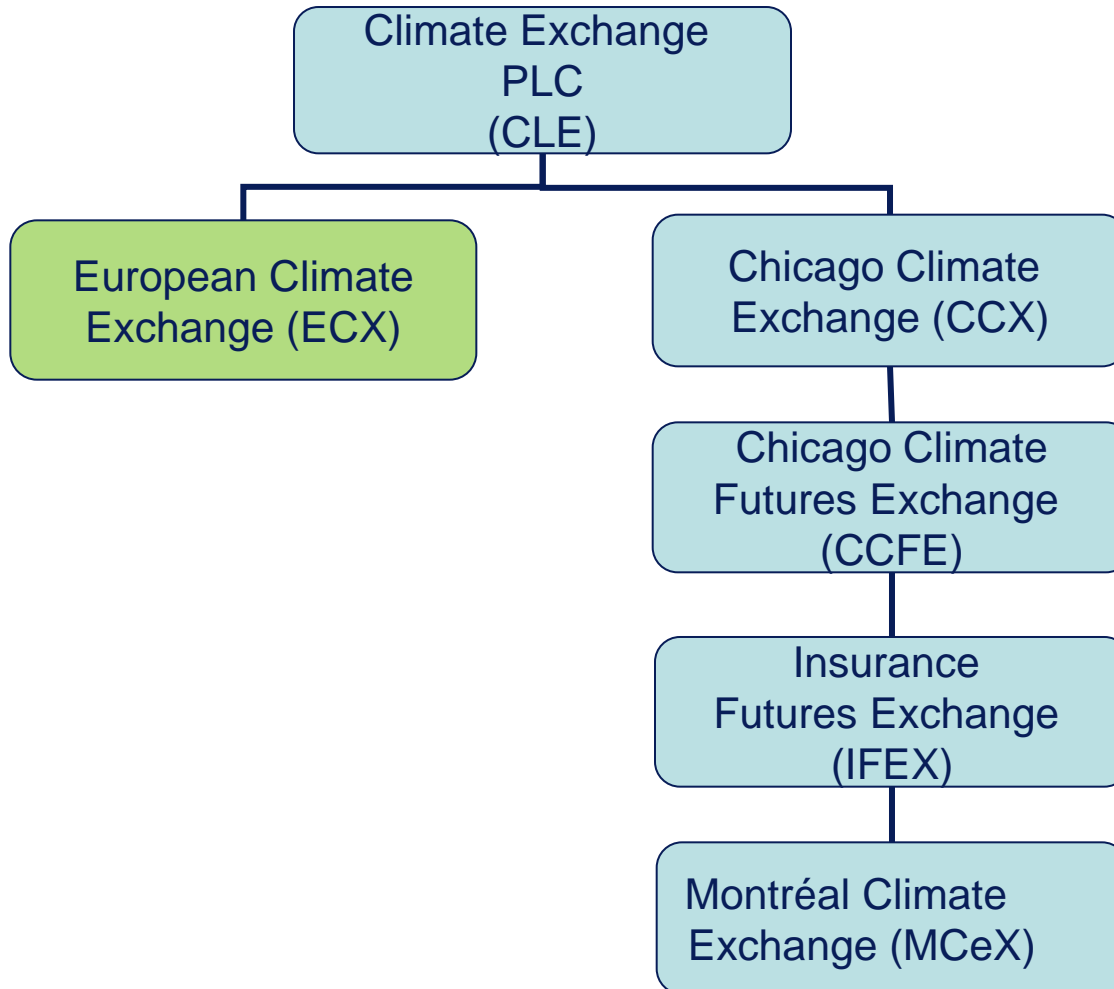


Who is the Carbon Market?





About ECX: Corporate structure





ECX & ICE Partnership

Product	Strip	+	-	Sell	Qty	Bid	Offer	Q	FP Vol	Opt Block	Settlement	Cha
ECX EUA Daily Futures	ECX Futures Today						5	13.38	13.45		0		13.25	
ECX CER Daily Futures	ECX Futures Today						20	12.13	12.13				11.98	
ECX EUA Futures	Dec10							13.60				875	13.45	
ECX EUA Futures	Dec11							14.04					13.90	
ECX EUA Futures	Dec12							14.79					14.68	
ECX EUA Futures	Dec13							15.74					16.68	
ECX CER/EUA Spr													-1.65	
ECX CER/EUA Spr													-2.14	
ECX CER/EUA Spr													-2.48	
ECX EUA Spr													-0.45	
ECX EUA Spr													-1.23	
ECX EUA Spr													-0.78	
ECX EUA Spr													-1.00	
ECX CER Futures											00		11.80	
ECX CER Futures													11.76	
ECX CER Futures													12.20	
ECX CER Futures Spr								05					0.04	
ECX CER Futures Spr	Dec							-0.40					-0.40	
ECX CER Futures Spr	Dec1							-0.47					-0.44	



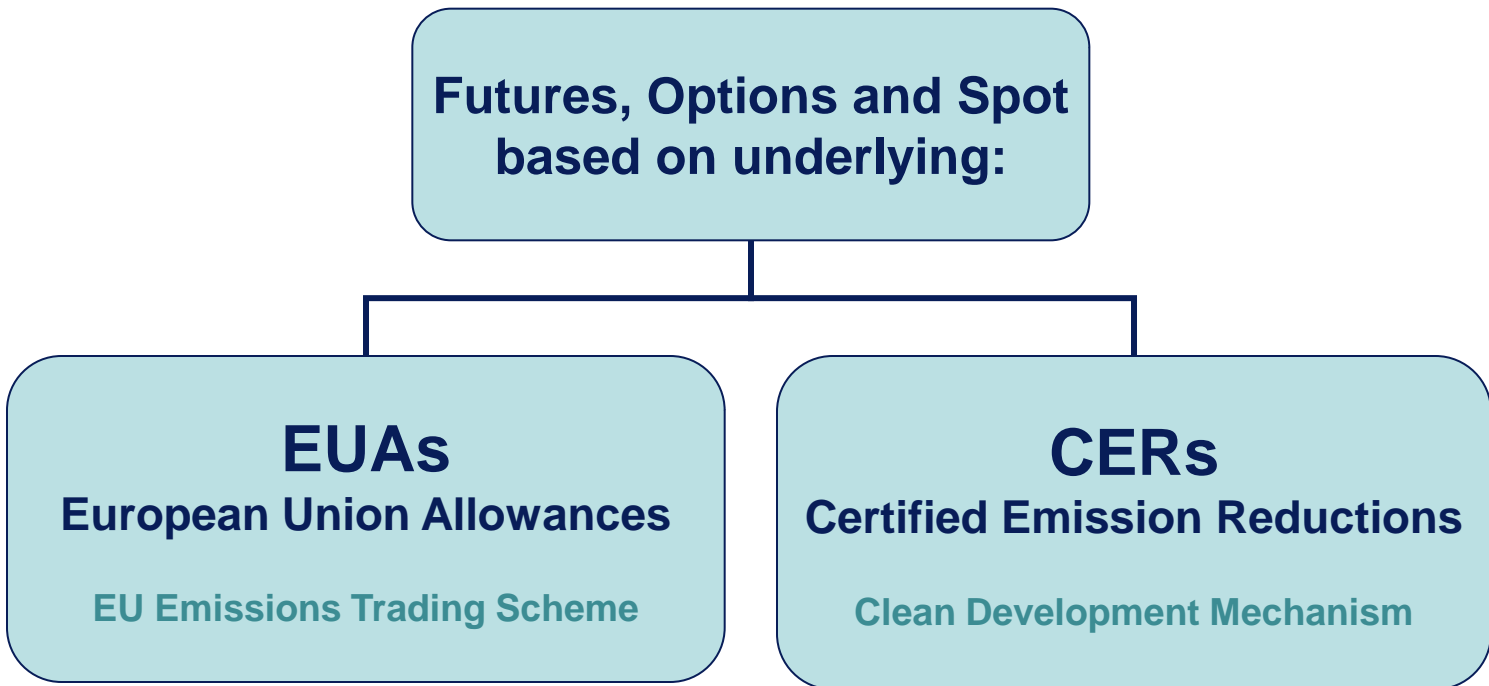
- Carbon Only
- Product Development
- Marketing & Education
- Relationship Management



- Systems Infrastructure
- Clearing & Settlement
- Market Surveillance
- Regulation & Legal



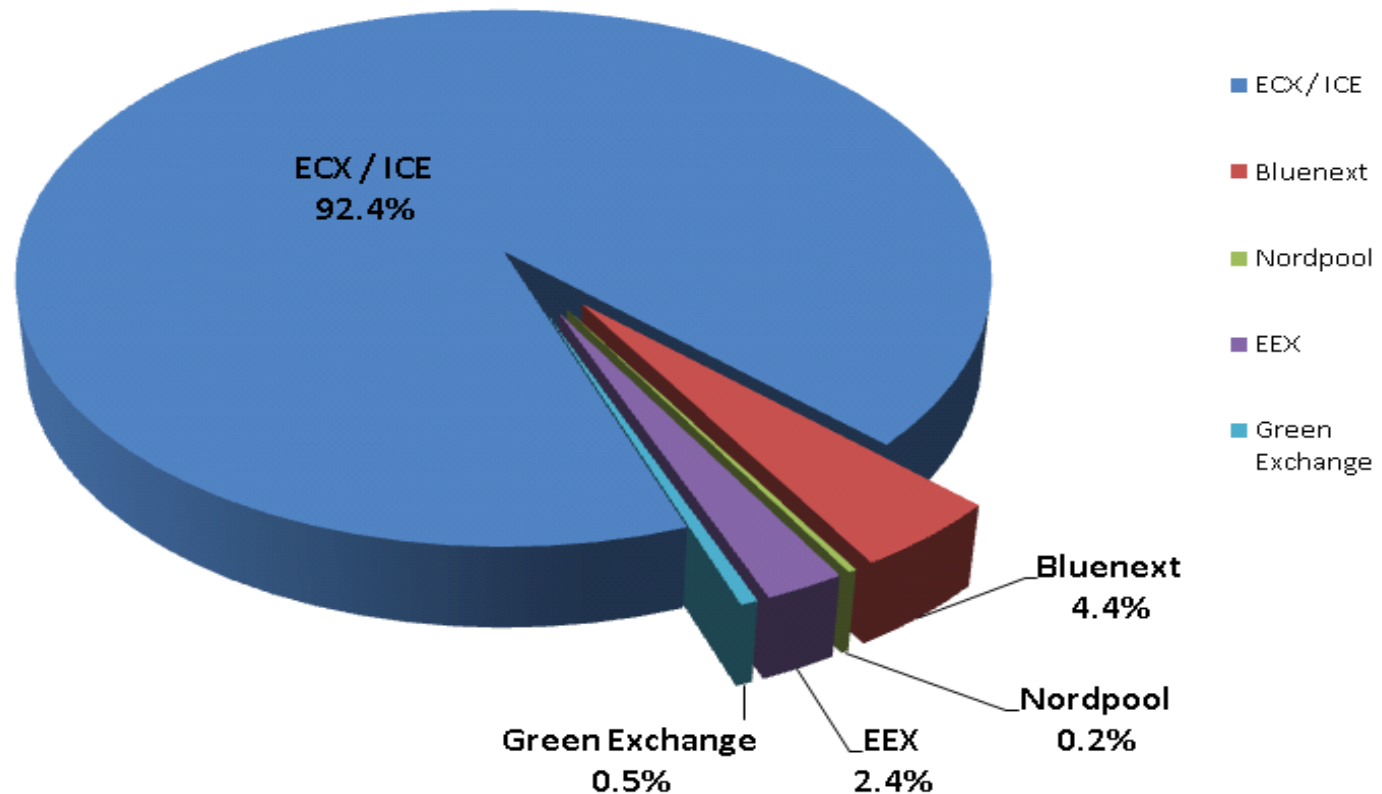
ECX Products





Carbon Exchanges Market Shares

Global Exchange Volumes (EUAs + CERs)
June 2010



ECX was awarded leading Exchange in the European Carbon Market Survey in 2005, 2006, 2007, 2008 & 2009

Environmental Finance

PUBLICATIONS

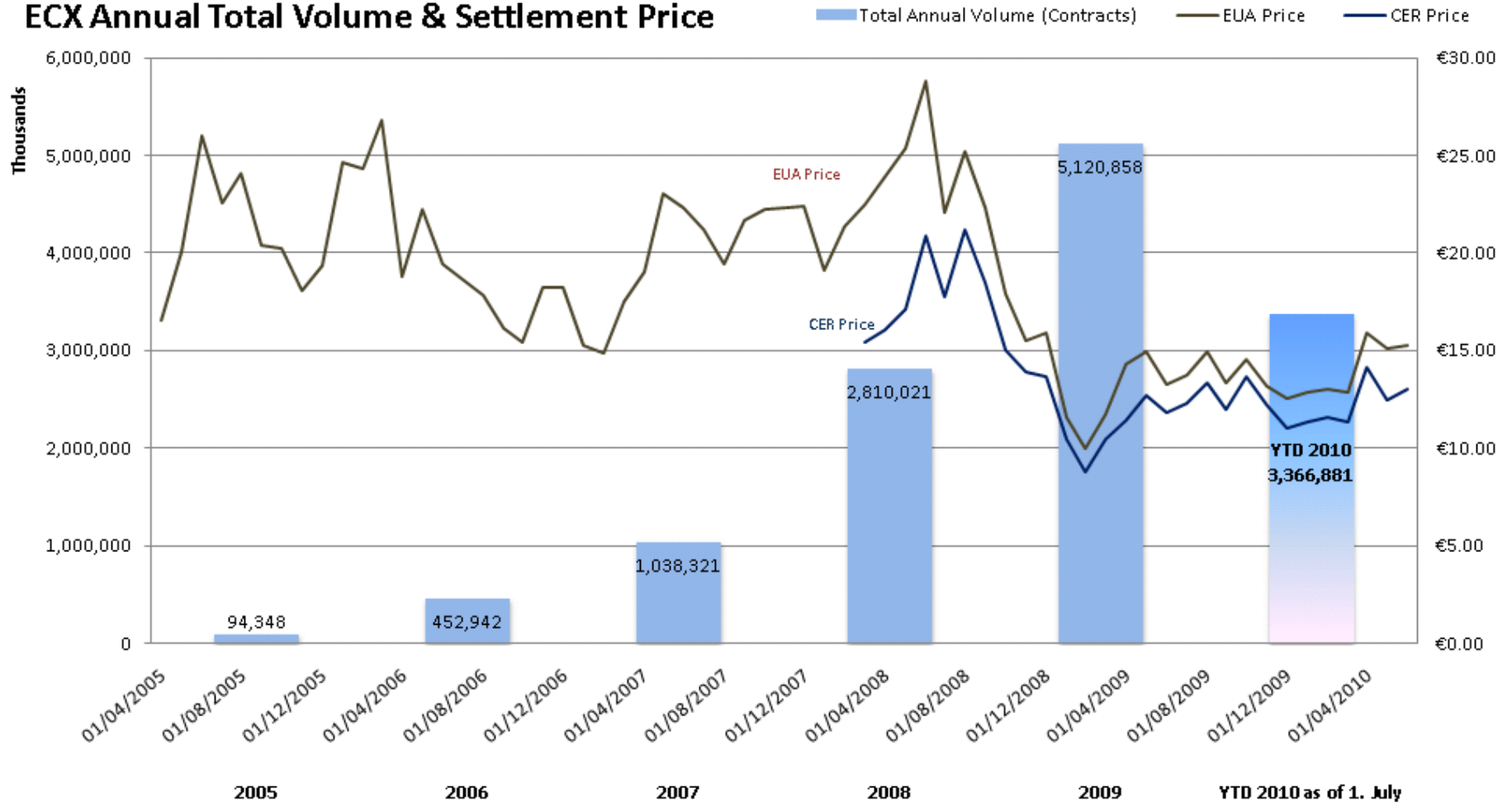
BEST EXCHANGE EU ETS

BEST EXCHANGE Kyoto Project Credits (JI & CDM)



ECX Annual Total Volume & Settlement Price

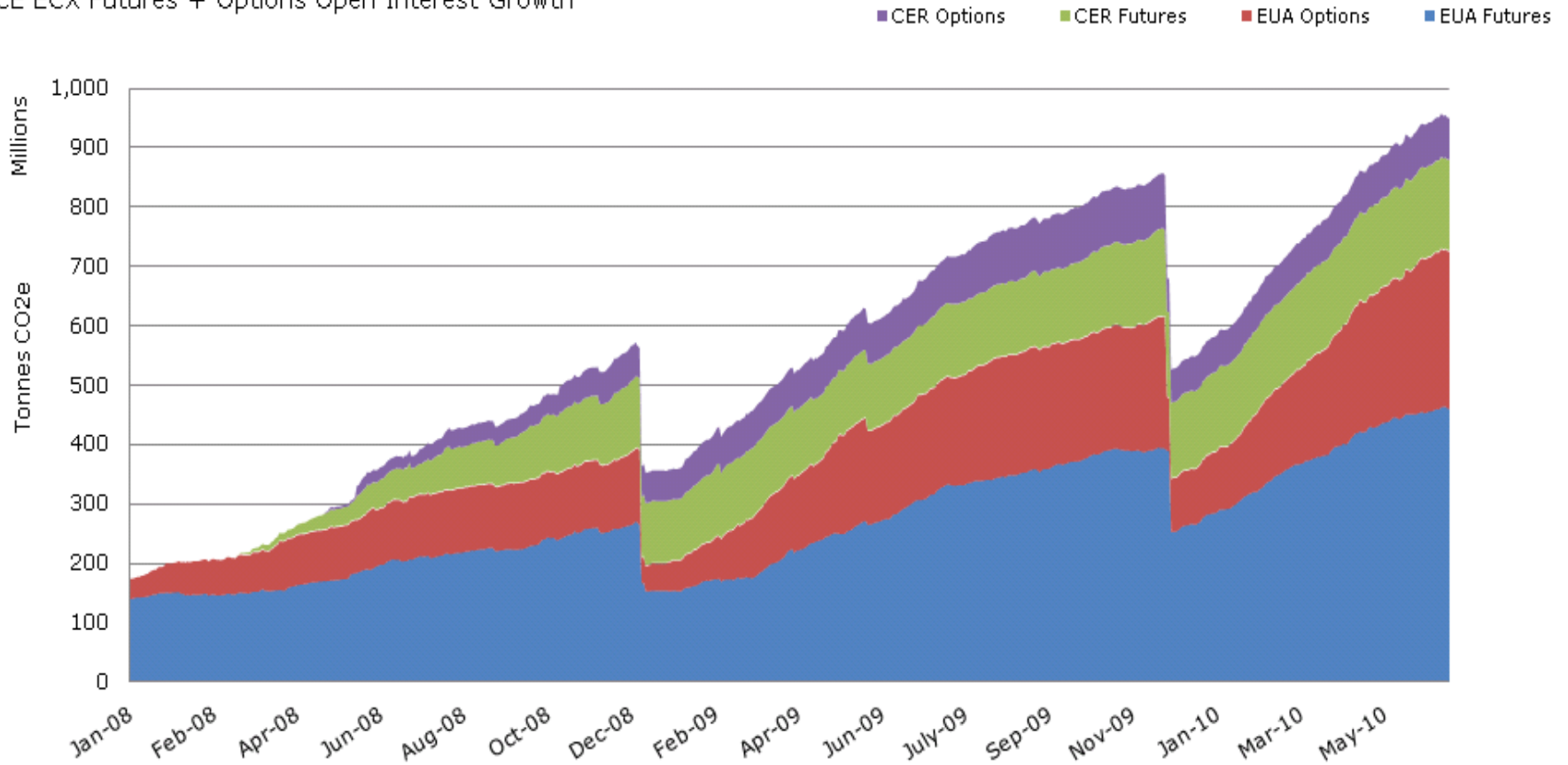
ECX Annual Total Volume & Settlement Price





Open Interest ECX Contracts

ICE ECX Futures + Options Open Interest Growth





How to Trade ECX Products

- There are two ways to access the market:
 1. **Order-Route** as a customer of a Clearing Member; or
 2. **Membership** of ECX/ ICE Futures Europe
- Access route decision will be driven by:
 - Nature of company
 - Type of trading activity
 - Volume of trading activity
 - Regulatory status
- Both Order-routers and Members are given direct screen access to execute orders on the market



ICE Futures Members enabled to trade ECX Contracts

Accord Energy
ADM Investor Services
Alpiq Trading
Bache Commodities
Banco Santander
Barclays Capital
BG International
BHF Bank
BNP Paribas Commodity Futures
BP Gas Marketing
British Energy Trading and Sales
Carbon Capital Markets
Carbon Desk Ltd
CEZ
Citadel Derivatives Trading
Citadel Equity Fund
Citigroup Global Markets
Climate Change Capital
Consus S.A.R.L.
Credit Suisse Securities
Deutsche Bank
E&T Energie
EDF Trading
EDP – Energias de Portugal
EGL Spain
EGL Trading AG
Electra Deutschland
Electrabel
Endesa Generacion
Energie AG
Energia-Obrót SA
First New York Securities
Five Rings Capital, LLC
Fortis Bank Global Clearing
Galp Power
Gazprom Marketing & Trading

Gazprom M&T - Singapore
Geneva Ireland Trading
Getco
GFI Securities
GH Financials
Goldman Sachs International
Greyhound Energy Trading Ltd
HSBC Bank
ICAP Futures LLC
ICAP Securities
IMC Trading
Infinium Capital Management
Jane Street Global Trading
Jaypee International
JP Morgan Securities
Jump Trading
KFW
KlimInvest
Lehman Brothers International
Limestone Trading
Macquarie Bank Limited
Madison Tyler Trading
Marex Financial
Marquette
Marubeni Corporation
Merrill Lynch Commodities
Merrill Lynch International
MF Global
Mizuho Securities USA
Morgan Stanley
Natixis Commodity Markets
Newedge (formerly Calyon)
Newedge (formerly FIMAT)
Nomura International plc
Optiver VOF
R.J. O'Brien & Associates

Rand Financial Services
RBC Capital Markets Corporation
RBS Sempra Energy Europe
REN Trading
Rosenthal Collins Group LLC
Royal Bank of Canada Europe
Sagacarbon
Saxon Financials
Schneider Trading
Schnell & Co.
Scottish Power Energy
SEB Futures
Shell Int. Trading & Shipping
Smartest Energy
Spectron Energy Services
Stadtwerke Leipzig
Statkraft Energi
Sucden UK
Susquehanna
TFS Derivatives
The Royal Bank of Scotland
ThyssenKrupp
Tibra Trading Europe
Total Global Steel
Tradelink
Triland USA
TRX Futures Limited
Tullett Prebon Securities
UBS
Vattenfall
Universal Data
Verbund
Wachovia Bank
XR Trading, LLC



ICE Clear Europe Clearing Members



Clearing Members of ICE Futures Europe able to offer clearing and trading services for ECX Contracts to third parties.



ICE ECX Screen Shot

ice																			
View Admin Help Logout																			
All Activate All Live Only Hold Bids Hold All Hold Offers Excel																			
Orders Deals ECX carbon Brent WTI BrentWTI Gasoil Heating Oil UK NatGas Coal UK Power CCX Sugar Coffee Cocoa Cotton																			
Hold All On Hit/Lift Hold Bids On Hit Hold Offers On Lift Re-Link Agents History Formulas																			
Product	Strip	+	-	Option	Strk	Sell	Qty	Bid	Offer	Qty	Buy	High	Low	Last	Volume	EFP Vol	Opt Block	Settlement	Change
ECX EUA Daily Futures	ECX Futures Today	+					5	14.57	14.63	30		14.75	14.44	14.60	1379	1025		14.42	0.18
ECX CER Daily Futures	ECX Futures Today	+					2	13.15	13.33	10		13.36	13.36	13.36	10	0		13.02	0.34
ECX EUA Futures	Jun10																500	14.47	
ECX EUA Futures	Dec10	+					2	14.72	14.75	35		14.89	14.54	14.74	16151	4006	2925	14.56	0.18
ECX EUA Futures	Dec11	+					2	15.14	15.20	38		15.32	15.04	15.10	1234	453		15.01	0.09
ECX EUA Futures	Dec12	+					2	15.88	15.92	15		16.03	15.76	15.86	2331	1175		15.75	0.11
ECX EUA Futures	Dec13	+					10	17.00	17.08	15		16.98	16.94	17.09	48	300		16.93	0.05
ECX CER/EUA Spr	Dec10	+					25	-1.69	-1.65	5		-1.67	-1.70	-1.67	57	0		-1.70	0.03
ECX CER/EUA Spr	Dec11	+					10	-2.39	-2.35	25		-2.35	-2.40	-2.35	18	0		-2.41	0.06
ECX CER/EUA Spr	Dec12	+					25	-3.29	-3.26	25		-3.15	-3.27	-3.27	42	0		-3.34	0.07
ECX EUA Spr	Dec10/Dec13						10	-2.37	-2.32	10									-2.37
ECX EUA Spr	Dec10/Dec11	+					23	-0.45	-0.42	125		-0.41	-0.45	-0.45	841	0		-0.45	0.00
ECX EUA Spr	Dec10/Dec12	+					100	-1.18	-1.16	48		-1.15	-1.19	-1.18	1628	0		-1.19	0.01
ECX EUA Spr	Dec11/Dec12	+					2	-0.74	-0.72	25		-0.72	-0.75	-0.73	301	0		-0.74	0.01
ECX EUA Spr	Dec11/Dec13	+					10	-1.94	-1.88	10		-1.91	-1.91	-1.91	3	0		-1.92	0.01
ECX EUA Spr	Dec12/Dec13	+					22	-1.19	-1.16	24		-1.17	-1.18	-1.18	29	0		-1.18	0.00
ECX CER Futures	Dec10	+					17	13.01	13.07	5		13.18	12.86	13.03	532	377	50	12.86	0.17
ECX CER Futures	Dec11	+					30	12.74	12.83	5		12.90	12.60	12.79	176	83		12.60	0.19
ECX CER Futures	Dec12	+					35	12.56	12.65	1		12.71	12.41	12.57	584	550		12.41	0.16
ECX CER Futures Spr	Dec10/Dec11	+					32	0.24	0.27	36		0.24	0.23	0.24	13	0		0.26	-0.02
ECX CER Futures Spr	Dec10/Dec12	+					1	0.42	0.45	55		0.46	0.42	0.42	40	0		0.45	-0.03
ECX CER Futures Spr	Dec11/Dec12	+					1	0.18	0.19	8		0.19	0.18	0.18	34	0		0.19	-0.01

ECX EUA Daily Futures - ECX EUA Daily - ECX Futures Today, 4 @ 14.60 (16:16:01 BST)
 ECX EUA Futures - ECX - Dec10, 4 @ 14.74 (16:16:01 BST)
 ECX EUA Futures - ECX - Dec10, 25 (16:13:47 BST) <<EFP/EFS>>
 ECX EUA Futures - ECX - Dec10, 15.00 Call European, 250 (16:13:30 BST) <<EFP/EFS>>
 ECX EUA Daily Futures - ECX EUA Daily - ECX Futures Today, 1 @ 14.60 (16:15:24 BST)
 ECX EUA Futures - ECX - Dec10, 1 @ 14.74 (16:15:24 BST)
 ECX CER Futures - ECX CER - Dec12, 200 (16:12:50 BST) <<EFP/EFS>>
 ECX EUA Futures - ECX - Dec10, 18 (16:12:56 BST) <<EFP/EFS>>
 ECX EUA Futures - ECX - Dec10, 1 @ 14.74 (16:14:38 BST)
 ECX EUA Futures - ECX - Dec10, 1 @ 14.73 (16:14:18 BST)
 ECX EUA Futures - ECX - Dec10, 12.00 Put European, 100 (16:12:13 BST) <<EFP/EFS>>



ECX Contracts Fee Structure

Futures, Options & Daily Futures

Fee Type	EUA & CER Futures	EUA & CER Options	EUA & CER Daily Futures (Spot)
Exchange Fee <i>(inc Blocks, EFPs and EFSs)</i>	Members €2.00 or: Order Routers €2.50	Members €2.00 or: Order Routers €2.50	Members €4.00 or: Order Routers €5.00
ICE Clear Europe Clearing Fee <i>(inc Blocks, EFPs and EFSs)</i>	€1.50	€1.50	€3.00

- All Exchange and Clearing Fees are charged per lot per side. 1 lot represents 1,000 metric tonnes.
- ECX Options are subject to a €1.50 Exercise Fee



Membership Fee Structure

Membership Category	Annual Fees		Application Fees (one-off)		Year 1 Total Fees	Year 2 (and onwards) Total fees
	ICE Membership	Emissions Trading Privilege	ICE Membership	Emissions Trading Privilege		
General Participant	\$11,500	€2,500	\$4,500	€2,500	\$16,000 + €5,000	\$11,500 + €2,500
Trade Participant	\$4,500	€2,500	\$4,500	€2,500	\$9,000 + €5,000	\$4,500 + €2,500

Both ICE & ECX Membership fees apply to access ECX products



Margin Rates

EUA and CER Contracts

Margin comes in two forms: Initial and Variation Margin

1. **Initial margin** is a returnable good faith deposit required whenever a futures or options position is opened. The money is returned when the position is closed out or expires (goes to delivery)
2. **Variation Margin** represents the profit/ loss in a position each day. ICE Clear Europe calculates the profits/ losses sustained on each position at the end of day.

Initial Margin	ECX EUA Futures Contract (per lot)	ECX CER Futures Contract (per lot)	ECX EUA & CER Daily Futures Contract ('Seller Security')
Outright			
Sep10 to Dec10	€770	€680	EUA: 18%
Mar11 to Dec11	€800	€680	CER: 18%
Mar12 to Dec12	€800	€680	
Dec13 to Dec14	€830	€680	
Inter-month spread	€325	€200	N/A

NB:

- 65% initial margin offset currently applies between EUAs and CERs
- Inter-month spread applies to EUA or CER spread trades and charged per spread trade, not per leg
- EUAs & CERs are accepted as collateral for initial margin - a 25% haircut applies
- Seller Security for Daily Futures is expressed as a percentage of the contract value and is returned after 24 hrs
- Initial margin for Options is not charged on a "per lot" basis but calculated on the overall risk (delta) of the position



Delivery Mechanism



EUAs and CERs are held in dematerialized form in a national registry account.
In the case of physical delivery a registry account will be required.

Appendices



How to Become an Order-routing Client

- No need to apply for ICE Futures membership
- Client signs Terms of Business with Clearer
- Clearer provides either WebICE or ISV (Independent Software Vendor) solution for trading
- Client has direct electronic execution ability onto the ICE platform for the trading for ECX CFIs
- Trades are registered with ICE Clear Europe in name of clearer and client remains anonymous
- Access via a broker will be arranged between broker and Clearing Member and brokerage fees will be charged





How to Become an ECX Member of ICE Futures

Complete:

- a) Application Form
- b) Electronic User Agreement (EUA)
- c) If Clearing Member: Have or be in the process of securing membership of ICE Clear Europe; or
If Non-Clearing Member: Clearing Agreement
- d) Assign at least one Responsible Individual (RI) to trade
- e) Application processed and formally presented to the ICE Futures' Authorisation, Rules and Conduct Committee for approval
- f) Pay application fee and annual subscription to ICE and ECX





Contract Specifications

ICE ECX EUA & CER Futures Contract

Contracts Listed	Contracts are listed on a quarterly expiry cycle such that additional contract months are listed from Dec 2010 to March 2013 on a March, June, September and December cycle. EUA Futures have an additional Dec 2014 contract month.
Unit of trading	<p>EUAs: One lot of 1,000 CO2 EU Allowances. Each EU Allowance being an entitlement to emit one tonne of carbon dioxide equivalent gas</p> <p>CERs: One lot of 1000 certified emission reduction units (CER) (i.e. units issued pursuant to Article 12 of the Kyoto Protocol and the decisions adopted pursuant to the UNFCCC to the Kyoto Protocol with the exception of allowances generated by hydroelectric projects with a generating capacity exceeding 20MW, LULUCF activities and nuclear facilities). Each CER being an entitlement to emit one tonne of carbon dioxide equivalent gas.</p>
Minimum Trading Size	1 lot / contract (= 1000 tonnes of EU allowances or Certified Emission Reduction units)
Tick Size	€0.01 per tonne (i.e. €10.00 per lot)
Settlement and Delivery	Contracts are physically settled by transfer of EUAs/CERs from seller's account to buyer's account via clearing member account and ICE Clear Europe. Delivery takes place three days after last trading day. The Exchange will, from time to time, issue a list of Registries from which ICE Clear will accept and will deliver EUAs/CERs. Initially, this will be restricted to the UK Registry.
Settlement Prices	Trade weighted average during the daily settlement period (16:50:00 – 16:59:59 hours UK Local Time) with Quoted Settlement Prices if low liquidity.
Clearing & Contract Security	ICE Clear Europe acts as central counterparty to all trades and guarantees financial performance of ICE Futures contracts registered in the name of its Members.
Standard Trading Hours	07:00 to 17:00 UK Local Time (02:00 to 12.00 EST)
VAT and Taxes	The UK's HM Revenue and Customs have confirmed that the trading of the ICE ECX EUA Futures on the Exchange between the Member and ICE Clear Europe has been granted interim approval to be zero-rated for VAT purposes under the terms of the Terminal Markets Order.



Contract Specifications

ICE ECX EUA and CER Daily Futures Contracts

Contacts Listed	The contract is a daily contract. Only one Daily Contract is listed at any one time
Unit of trading	<p>EUAs: One lot of 1,000 EU Allowances. Each EU Allowance being an entitlement to emit one tonne of carbon dioxide equivalent gas.</p> <p>CERs: One lot of 1,000 Certified Emission Reduction units (i.e. units issued pursuant to Article 12 of the Kyoto Protocol and the decisions adopted pursuant to the UNFCCC to the Kyoto Protocol with the exception of allowances generated by hydroelectric projects with a generating capacity exceeding 20MW, LULUCF activities and nuclear facilities). Each CER being an entitlement to emit one tonne of carbon dioxide equivalent gas.</p>
Minimum Trading Size	1 lot / contract (= 1,000 tonnes European Allowances or CER units)
Tick Size	€0.01 per tonne (i.e. €10.00 per lot)
Delivery	Delivery is between Clearing Members and ICE Clear Europe during a Delivery Period. The Delivery Period is the period beginning at 18:30 hours on the Contract Date and ending at 19:00 hours on the second Business Day following the relevant Contract Date. There is provision for 'Late' and 'Failed' delivery within the Contract Rules.
Settlement Prices	Trade weighted average during the daily closing period (16:50:00 – 16:59:59 hours UK local time) with Quoted Settlement Prices if low liquidity.
Clearing & Contract Security	ICE Clear Europe acts as central counterparty to all trades and guarantees financial performance of ICE Futures contracts registered in the name of its Members.
Trading Hours	07:00 to 17:00 UK Local Time (02:00 to 12.00 EST)
Margin	Seller pays margin ("Seller's Security") by 09:00 on T+1
Payment	Buyer pays full contract value by 09:00 on T+1
VAT and Taxes	The UK's HM Revenue and Customs have confirmed that the trading of the ICE ECX EUA & CER Daily Futures on the Exchange between the Member and ICE Clear Europe has been granted interim approval to be zero-rated for VAT purposes under the terms of the Terminal Markets Order.



Contract Specifications

ICE ECX EUA & CER Options Contract

Contracts Listed	Up to 8 contract months are listed on a quarterly expiry (March, June, September and December), with 4 new contract months listed on expiry of the December contract. Additional December contracts are listed out to Dec 12 (and an additional Dec-13 contract month only for EUA Options).
Minimum Trading Size	1 lot / contract (= 1,000 tonnes European Allowances or CER units)
Tick Size	€0.01 per tonne (i.e. €10.00 per lot)
Settlement and Delivery	ECX EUA Options Contracts turn into ECX EUA Futures Contracts (CER Options turn into CER Futures) at expiry (which are physically settled contracts) 3 business days before the expiry of the relevant ECX EUA or CER Futures Contract.
Settlement Prices	Trade weighted average during the daily closing period (16:50:00 – 16:59:59 hours UK local time) with Quoted Settlement Prices if low liquidity.
Clearing & Contract Security	ICE Clear Europe acts as central counterparty to all trades and guarantees financial performance of ICE Futures contracts registered in the name of its Members.
Standard Trading Hours	07:00 to 17:00 UK Local Time (02:00 to 12.00 EST)
Option Style and Premium	European-style. Premiums are paid at the time of the transaction.
Quotation	A range of strike prices are automatically listed for each contract month covering the price range from €1.00 – €100.00 for EUAs and €1.00 – €55.00 for CERs. The Exchange may add one or more strike prices nearest to the last price listed as necessary. Strike price intervals are €0.50.
Trading System	Trading will occur on ICE Futures' electronic trading platform (known as the ICE Platform) which is accessible via WebICE or through a conformed Independent Software Vendor.
VAT and Taxes	The UK's HM Revenue and Customs have confirmed that the trading of the ICE ECX EUA & CER Daily Futures on the Exchange between the Member and ICE Clear Europe has been granted interim approval to be zero-rated for VAT purposes under the terms of the Terminal Markets Order.



The EFP/EFS/Block Mechanisms

OTC Cleared Trades

- The Exchange-for-Physical (EFP) and Exchange-for-Swap (EFS) mechanisms can be used by participants in the emissions markets who wish to avoid bilateral risk exposure, by registering positions with the Exchange for clearing by ICE Clear Europe. Price is not published.
- Block trades are large (minimum 50 lots) pre-negotiated futures transactions executed off-exchange, avoiding price distortion. Block trades need to be reported to the Exchange within 5 minutes of execution. Their price and volume is reported to the market.
- In order to use the Block/EFP/EFS mechanisms, both counterparties of the trade are required to have a clearing agreement in place with a Clearing Member of ICE Futures Europe.



ECX Indices

- **ECX EUA Emissions Morning Marker**
A trade-weighted average of all ECX EUA futures trades within 15 minute period from 9.00 –9.15 UK Local Time. Published shortly after 9.15 UK Local Time for the Jun10, Dec10, Dec11, Dec12 and Dec13 contract months.
- **ECX EUA Emissions Index**
A trade-weighted average of all ECX EUA futures trades over the course of the trading day (07:00-17:00). Published shortly after 18.00 UK Local Time for the Jun10, Dec10, Dec11, Dec 12 and Dec13 contract months.
- **ECX CER Emissions Index**
A trade-weighted average of all ECX CER futures trades over the course of the trading day (07:00-17:00). Published shortly after 18.00 UK Local Time for the Sep10, Dec 10, Dec11 and Dec12 contract months.
- *ECX indices are used by the market as benchmarks but are not tradable. Published on www.ecx.eu (Market Data)*



Authorised Data Vendors

Codes for viewing live ECX prices

Vendor	EUA Futures	EUA Options	CER Futures	CER Options	EUA Daily Futures	CER Daily Futures
Bloomberg	EMIT (see tab 92 for EUA Futures)	OMON	CARA comdty CT<GO>	CARZ9C	ICEDEUA	ICEDCER
CQG	UX	UX	QCER	Options QCER	ECX	CES
E-Signal /FutureSource	LUX	ECFI{month}-ICE	<17t>CERmy	CER{month}-ICE	ECS 9H-ICE	CES 9H-ICE
ICE Live	LUX	LUX	LUX	LUX	LUX	LUX
IDC	<17>t,UX		<17t>CERmy			
Reuters	0#CFI:	CFI+	0#CERE:	0#CERE+	0#CFI2D:	ICEDCER