



# Nasdaq Calypso

## Setting up Emission Commodities

Version 18

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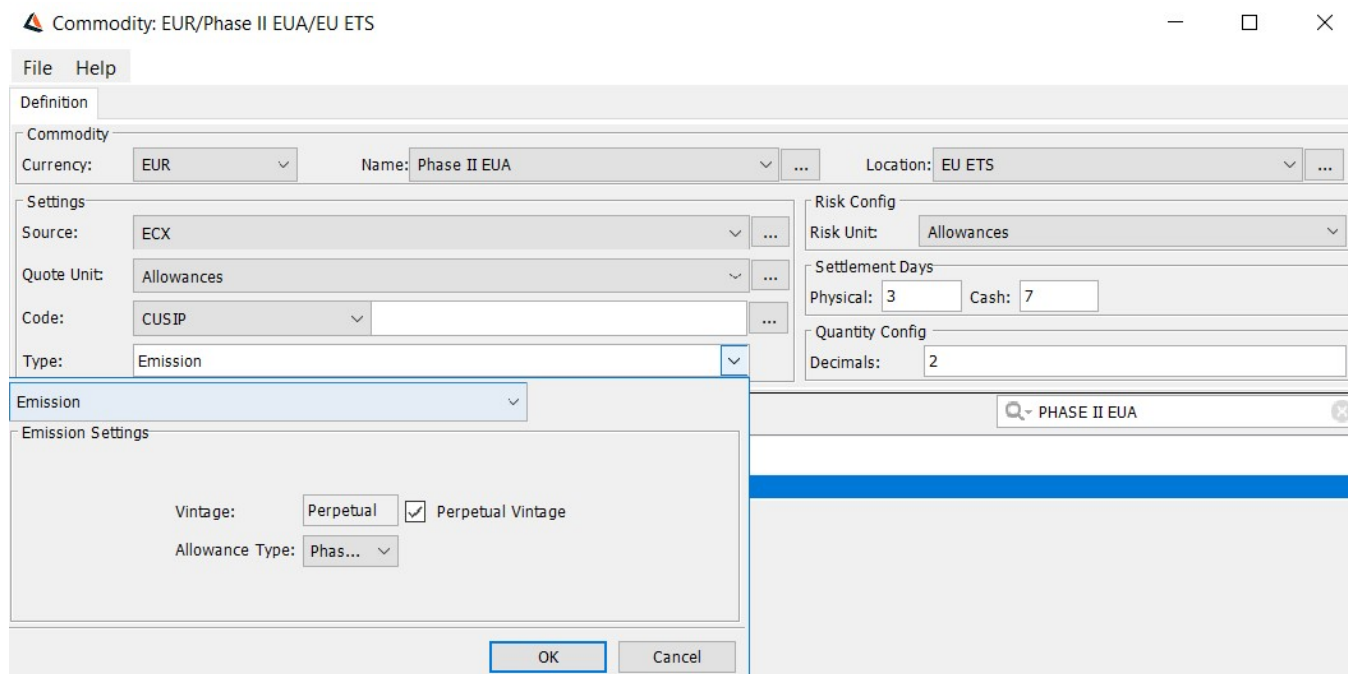
Approved

# 1. Setting up Emission Commodities

The Emission commodity product is for trading emissions, such as carbon emission allowances.

Configuration specific to emission commodities is as follows:

## 1.1 Commodity Definition

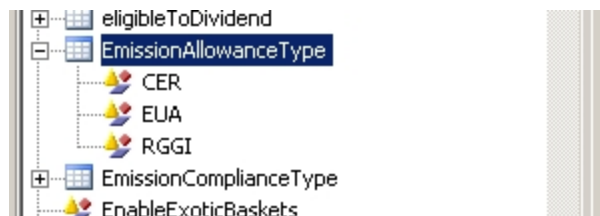


- » Select Type = Emission.
- » Enter the Vintage year or check "Perpetual Vintage" for perpetual vintage.

Allowances issued in a vintage-based scheme should have the vintage year entered in the Vintage field.

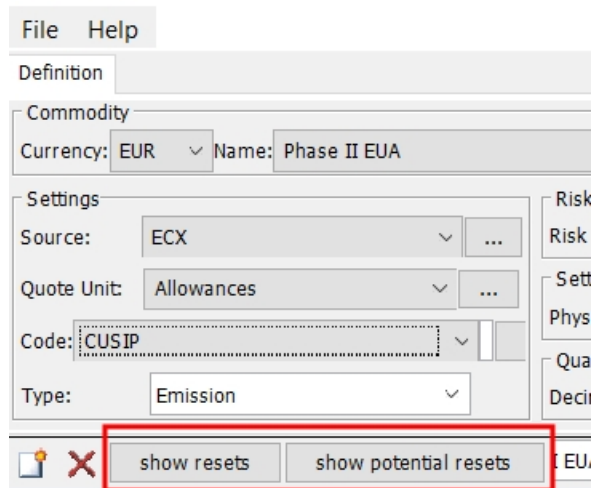
For emission schemes such as the EUETS, that do not follow a vintage system, the allowances are not tied to a specific year and are redeemable as soon as they are issued. In these cases, Perpetual Vintage should be checked.

- » Select the Allowance Type. Available values are defined in the *EmissionAllowanceType* domain.



The **show resets** and **show potential resets** buttons appear.

Commodity: EUR/Phase II EUA/EU ETS



Before saving the commodity, you can click **show potential resets** to display existing commodity resets that could be associated with the commodity.

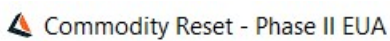
resets.

Once the commodity is saved, you can click **show resets** to display existing commodity resets actually associated with the commodity.

## 1.2 Commodity Reset

- » Existing commodity reset definitions are loaded by default. Select a reset to view the details. You can modify the details and click **Save** as needed.
- » The reset type can be selected as either Emission or Commodity-
  - If the reset type is selected as Emission, multiple allowances can be delivered under the same reset criteria.
  - If the reset type is selected as Commodity, a one-to-one mapping with the corresponding commodity product is done.

### Reset Type - Emission

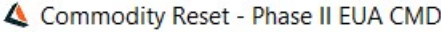

—
□
×

Name:	Phase II EUA	...	Id: 26774	
Reset Type:	Emission			
Allowance Criteria:	Ph...	Perpetual Compliance	Lower Vintage:	Upper Vintage:
Currency:	EUR		Time: 12	30
Quote Unit:	Tonnes		Time Zone:	Asia/Calcutta
Quote Type:	Price			
Future Contract:				
Forward Price:	InterpolatedPrice: Price on curve date equal to the FixDate, using the Interpolator defined in t...			
Fixing Holiday:				
Fwd Price Holiday:				
Code:	REFERENCE_PRICE			
Details:				

show linked Comm.
show potential Comm.

New
Refresh
Delete
Save

## Reset Type - Commodity


—
□
×

Name:	Phase II EUA CMD	...	Id:		80725	
Reset Type:	Commodity					
Commodity:	EUR/Phase II EUA/EU ETS					...
Currency:	EUR		Time:	12	H	30 M
Quote Unit:	Tonnes		Time Zone:	Asia/Calcutta		
Quote Type:	Price					
Future Contract:						
Forward Price:	InterpolatedPrice: Price on curve date equal to the FixDate, using the Interpolator defined in t...					
Fixing Holiday:						...
Fwd Price Holiday:						...
Code:	REFERENCE_PRICE					
Details:						

New
Refresh
Delete
Save

► For information regarding Commodity Reset, refer to Commodity Reset Definition.

## 1.3 Forward Curve

Commodity Forward Curves can be created using an underlying instrument. ([Market Data > Commodity Curves > Forward Curve](#))

In the following figures, an example of Emission Forward Curve is displayed-

### Definition

Curve (109620) EUA\_ENBD EUR CLOSE Carbon 1M 7/18/23 7:00:00 PM U...

Curve Utilities Help

Name  CLOSE  7:00:00 PM ☐ Current

Definition Underlying Quotes Points Graph Display Config

Commodity  ...

Value Type  Currency  Unit

Interpolator  ... Generation Alg.  ...

☒ Generate from instruments

Curve Type

Pricing Env


Holidays  ...

Name	Value
Fill Missing Quotes	<input checked="" type="checkbox"/>
2nd Interpolator Cutoff	
2nd Interpolator	
Short-end extrapolation	

Comment

Load ... New Delete ... Save Save As ... Close

## Underlying


Curve (109620) EUA\_ENBD EUR CLOSE Carbon 1M 7/18/23 7:00:00 PM U...

Curve
Utilities
Help

Name EUA\_
CLOSE
Date 07/18/23
7:00:00 PM
☐ Current

Definition
Underlying
Quotes
Points
Graph
Display Config

Instrument type FutureCommodity
☐ All
New/Edit Underlying...
Underlying Instrument

Include
Exclude

Id	Description
277946	Future.EUR.ICE.Ca
267908	Future.EUR.ICE.Ca
267909	Future.EUR.ICE.Ca
267910	Future.EUR.ICE.Ca
277947	Future.EUR.ICE.Ca
267911	Future.EUR.ICE.Ca
267912	Future.EUR.ICE.Ca
267913	Future.EUR.ICE.Ca
277948	Future.EUR.ICE.Ca
277949	Future.EUR.ICE.Ca
277950	Future.EUR.ICE.Ca
277951	Future.EUR.ICE.Ca
277952	Future.EUR.ICE.Ca
277953	Future.EUR.ICE.Ca

>>
<<

Id	Type	Description	Included	Priority
278411	FutureCommodity	N23	<input checked="" type="checkbox"/>	0
278414	FutureCommodity	Q23	<input checked="" type="checkbox"/>	0
278426	FutureCommodity	U23	<input checked="" type="checkbox"/>	0
278412	FutureCommodity	V23	<input checked="" type="checkbox"/>	0
278419	FutureCommodity	Z23	<input checked="" type="checkbox"/>	0
278427	FutureCommodity	H24	<input checked="" type="checkbox"/>	0
278428	FutureCommodity	M24	<input checked="" type="checkbox"/>	0
278415	FutureCommodity	Q24	<input checked="" type="checkbox"/>	0
278429	FutureCommodity	U24	<input checked="" type="checkbox"/>	0
278420	FutureCommodity	Z24	<input checked="" type="checkbox"/>	0
278430	FutureCommodity	H25	<input checked="" type="checkbox"/>	0
278431	FutureCommodity	M25	<input checked="" type="checkbox"/>	0
278416	FutureCommodity	Q25	<input checked="" type="checkbox"/>	0
278432	FutureCommodity	U25	<input checked="" type="checkbox"/>	0
278421	FutureCommodity	Z25	<input checked="" type="checkbox"/>	0

Load ...
New
Delete ...
Save
Save As ...
Close

## Points

Curve (109620) EUA\_ENBD EUR CLOSE Carbon 1M 7/18/23 7:00:00 PM U...

Curve Utilities Help

Name  CLOSE   ☐ Current

Definition Underlying Quotes Points Graph Display Config

Date	Price
07/31/2023	84.99
08/28/2023	85.19
09/25/2023	85.56
10/30/2023	86.01
12/25/2023	86.49
03/25/2024	87.85
06/24/2024	88.40
08/26/2024	89.00
09/30/2024	90.00
12/30/2024	90.81
03/31/2025	91.55
06/30/2025	93.00
08/25/2025	93.80
09/29/2025	94.30
12/29/2025	95.00
03/30/2026	96.30

Interpolate  
Date   
Price   
Generate

Load ... New Delete ... Save Save As ... Close

► For detailed information on setting up a forward curve, refer to Commodity Curves.

## 1.4 Sample Forward Trade

In the following figure, we have examples of an Emission Forward Trade differentiated by reset type-

### Reset Type - Commodity



CommodityForward 16/08/2022 EUR/Phase II EUA/EU ETS 50.0 Tonnes at (80.0-0.0) E...

Trade Back Office CommodityForward Cashflows Analytics Pricing Env Market Data View Utilities Help

Trade Details Fees Cashflows CSA Inv Attributes

Cpty
Book
Broker

CounterParty
Status VERIFIED
ID 193013
Template NONE

Trade Date: 20/07/2022 15:25:35 Current
Settle Date: 16/08/2022

Comm. Res... PhaseII EUA CMD

Deal
Buy 50.00000 Tonnes
Forward Price: InterpolatedPrice
Fixing Holidays:

Price
Price Ty... Fixed EUR Tonnes
Unadjus... 80 Discount: 0
Final Pri... 80

Payment
NO\_CHANGE Holiday: TARGET
Lag: 5 Bus Payment Day

Physical
NO\_CHANGE Holiday: TARGET
Lag: 2 Bus Payment Day

Certificates & Delivery

Trade Date	Settle Date	Quantity	Unit	Price	Location	Identifier	Certificate	Details

MarketData Pricer Params Results

	PRICE	NPV	DELTA
Net (EUR)	24.00	-2,799.64	49.99501
Net(USD)	24.00	-2,799.64	49.99501

Val Date Pricing Env OFFICIAL-CMD

Price Close

MarketData	Pricing Params	Results
DIS,DIS ZC EUR EURIBOR/EUR CLOSE 20/07/22 15:00:00.000 o'clock IST		
FOR Phase II EUA/EUR CLOSE 20/07/22 14:58:27.000 o'clock IST		

Val Date  Pricing Env OFFICIAL-CMD

Price
Close

*Reset Type - Emission*

CommodityForward 11/28/2023 Emission 10000.0 EUA at (52.0-0.0) EUR -PO is Default Processing Organisation (45557...

Trade Back Office CommodityForward Cashflows Analytics Pricing Env Market Data View Utilities Help

Trade		Details		Fees		Cashflows		Inv Attributes												
Cpty	CP	...	CounterParty																	
Book		...	Status	VERIFIED	ID															
Broker		...	Template	NONE																
Trade Date:	11/01/2023	11:00:00 AM	<input type="checkbox"/> Current	Settle Date:	11/28/2023															
Comm. Reset:	ICE_Carbon_Nearby																			
Deal					Price															
Buy	10,000.00000	EUA	Price Type:	Fixed	EUR	EUA	Unadjusted:	52	Discount:	0										
Forward Price:	InterpolatedPrice		Final Price:	52																
Fixing Holidays:	ICEU-IPE																			
Payment					Physical															
MOD_FOLLOW	Holiday:	TARGET	Lag:	5	Bus	<input type="checkbox"/> Payment Day	MOD_FOLLOW	Holiday:	TARGET	Lag:	2	Bus	<input type="checkbox"/> Payment Day							
Certificates & Delivery																				
Cheapest to deliver:				Carbon																
				<input checked="" type="checkbox"/> Set delivery:				Multi-delivery												
<table border="1"> <thead> <tr> <th>Product Description</th> <th>Deliver</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>EUA Allowance</td> <td><input checked="" type="checkbox"/></td> <td>4,000</td> </tr> <tr> <td>Carbon</td> <td><input checked="" type="checkbox"/></td> <td>6,000</td> </tr> </tbody> </table>												Product Description	Deliver	Quantity	EUA Allowance	<input checked="" type="checkbox"/>	4,000	Carbon	<input checked="" type="checkbox"/>	6,000
Product Description	Deliver	Quantity																		
EUA Allowance	<input checked="" type="checkbox"/>	4,000																		
Carbon	<input checked="" type="checkbox"/>	6,000																		
										<input type="button" value="OK"/> <input type="button" value="Cancel"/>										

MarketData		Pricing Params		Results	
PS_USD_LIBOR_USD(R)CLOSE 11/7/23 7:30:00.000 PM EST					
DIS_DIS EUR_EURIB_3M/EUR(R)CLOSE 11/6/23 6:30:00.000 AM EST					
FOR EUA_FWDPTS_Derived/EUR(R)CLOSE 11/6/23 7:30:00.000 PM EST					
FOR EUR_CARBOIN_FWD_PTS/EUR(R)CLOSE 11/3/23 7:30:00.000 PM EDT					
Val Date		Pricing Env	PS_EQDFX	Price	

» Click on **Price** to price the trade on the set Valuation Date.

- » The commodity is priced based on the Forward Price methodology selected while defining the Commodity Reset.
  - » After booking a Commodity Forward trade, the corresponding market data is generated based on the reset type selected when configuring the Commodity Reset.
- For more information on booking Commodity Forwards, refer to Capturing Commodity Forward Trades