

An aerial photograph of several business professionals in various colored jackets (black, blue, red, orange) standing on a large, light-colored world map. They are arranged in small groups, some appearing to be in conversation. The map is centered on the Atlantic Ocean, with North and South America visible on the left and Europe and Africa on the right. The background is a light, textured surface, possibly a wall or a large screen.

DCP model – direct access to spot market clearing

European Commodity Clearing AG
July 2024

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1. Overview on ECC Clearing Services

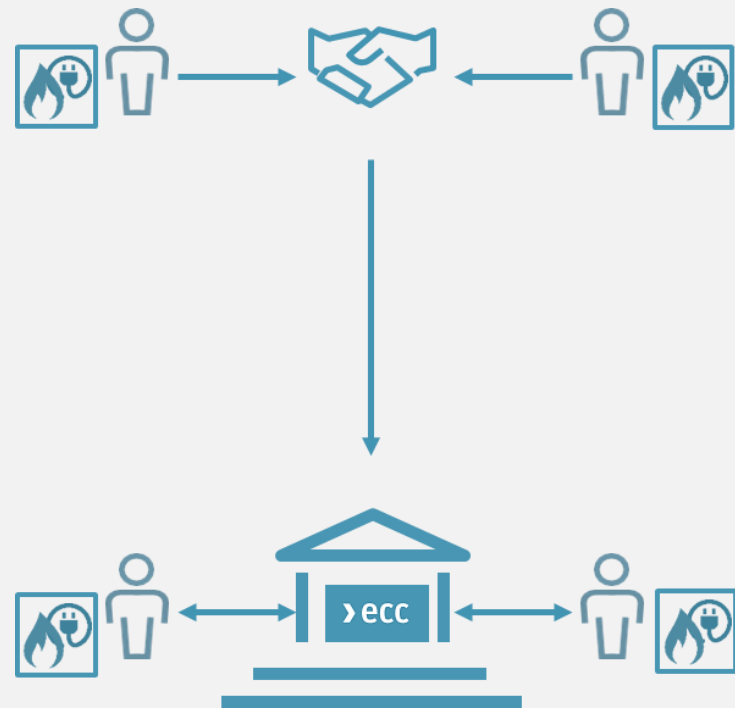
European Commodity Clearing guarantees fulfillment of all contracts

Clearing in a nutshell

The clearing house ensures the **fulfillment of a contract** concluded or registered on the exchange.

After a trade has been concluded the clearing house steps in as a central counterparty between the buyer and the seller.

In this role ECC **takes over the counterparty risk** for each participant and **guarantees delivery and payment** of the contract.



European Commodity Clearing AG



ECC partner exchanges and asset classes:

ECC is the **leading clearing house for spot and derivatives commodity** products in Europe and beyond. ECC was founded in 2006 and as part of the EEX Group it provides clearing and settlement services for many exchanges.

As a member of EEX Group, ECC belongs to Group Deutsche Börse.

BSP SouthPool (Power)*	SPOT
EPEX SPOT (Power)	
HUPX (Power)*	
SEEPEX (Power)*	
SEMOpX (Power)*	
EEX (Natural Gas, Emissions, GOs)	DERIVATIVES
EEX (Power, Natural Gas, Emissions, Agricultural, Freight)	
HUDEX (Power)*	
NOREXECO (Fibre)*	
EEX Asia (Dry Bulk Freight)	

*3rd party partner exchanges

Clearing: Safe and cost-efficient solution

Main benefits of ECC clearing and settlement services:

Financial Safeguard – ECC guarantees fulfilment of transactions



Clearing provides trading participants **the highest possible degree of safety** for spot and derivatives trading as the ECC clearing structure adheres to the high EU standards for Central Counterparties (CCP).

ECC is regulated by the German regulators BaFin and Bundesbank that constantly monitor ECC's risk models and adherence to the CCP license requirements (EMIR license).

Financial Settlement – Payment



ECC ensures the **fast and secure settlement of payments** for all purchases and sales concluded on ECC's partner exchanges.

Physical Settlement – Delivery



ECC has a **high level of expertise** in physical settlement of grid-bound energy products (power and natural gas) and related products (emission allowances and Guarantees of Origin) and is connected to 31 Transmission System Operators (TSOs) and registries.

Standardised processes

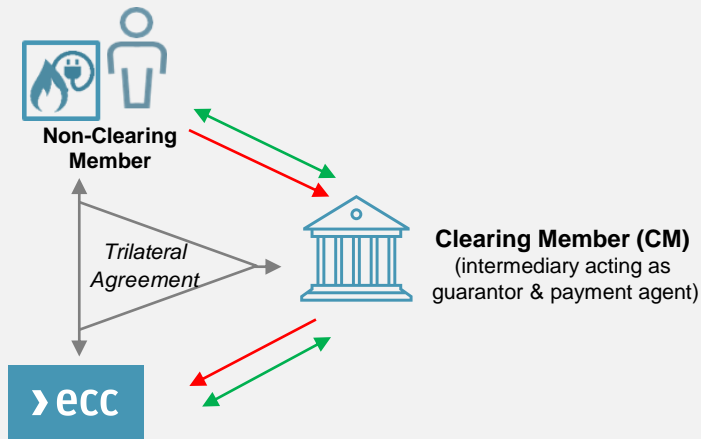


The integrated clearing structure towards exchanges, banks, and TSOs **reduces interfaces**, the number of payments as well as collateral requirements and enables standardised processes.

Access to clearing at ECC: Two clearing models

Non-Clearing Member (NCM) model

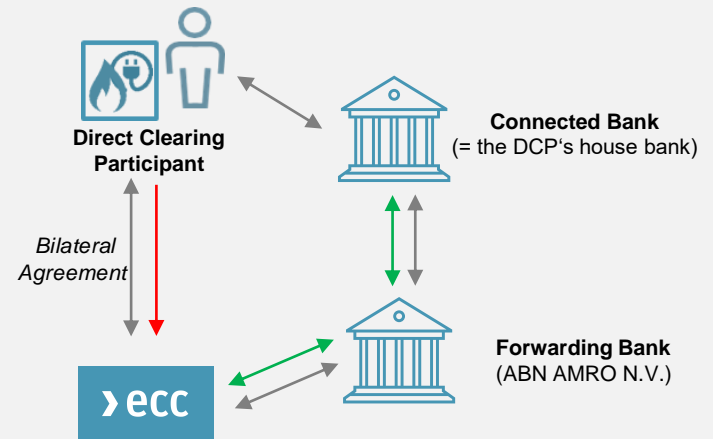
for spot and derivatives markets



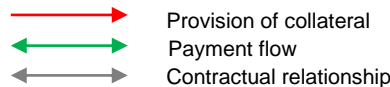
The participation in clearing as a Non-Clearing Member requires involvement of an intermediary – a **Clearing Member**. Only financial institutions can become Clearing Members at ECC. A Clearing Member is **liable towards ECC** for the obligations arising from trading activities of its NCM.

Direct Clearing Participant (DCP) model

for spot markets only



Direct Clearing Participants maintain a **direct business relationship** with ECC. No additional guarantor is involved. Payments for purchases/sales are processed through ECC's payment bank (**ABN AMRO Bank**) and the member's bank (**Connected Bank**).

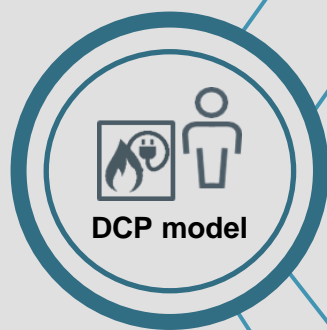


The DCP model is **only** available to companies **that is** approved by ECC for DCP access.
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DCP model: Main characteristics

The Direct Clearing Participant (DCP) Model is a special type of membership at ECC.
 It allows market participants to participate in the clearing process **without a Clearing Member**.



APPLICABLE MARKETS:

The DCP model is available only for **selected spot markets** (see slide 10 for the list of available markets).

COLLATERALISED TRADING LIMITS:

ECC acts as the direct counterparty for all transactions concluded by DCP members. The trading exposure of a DCP member is managed through financial pre-trade limits within the respective trading system. To obtain a financial pre-trade limit, the DCP member must provide collateral accepted by ECC. Unlike other ECC access models, there are no margin calls for DCP members.

PAYMENT PROCESS:

Payments for purchases and sales occur via the ECC Settlement Bank (ABN AMRO Bank) and the member's bank (Connected Bank). The member's bank must have a connectivity agreement with ABN AMRO Bank, which is connected to over 300 other banks worldwide.

RESTRICTION FOR ADMISSION:

The DCP model is available only to companies domiciled in a country that is approved by ECC for DCP access. The list of available countries is presented on slide 11.

NCM and DCP in comparison

	Non-Clearing Member (NCM)	Direct Clearing Participant (DCP)	
General differentiation	The NCM is in a business relationship with a Clearing Member . ECC's risk exposure resulting from an NCM's trading activities is covered through margins (Post-trade risk approach).	A DCP has direct access to ECC without a Clearing Member. ECC's risk exposure resulting from a DCP's trading activities is covered through collateralised pre-trade limits (Pre-trade risk approach).	
Markets	All markets – spot & derivatives	Spot only	
Bank	Clearing Member (CM) Guarantee & payment function	Connected Bank or ABN AMRO N.V. Payment function only, no guarantee function	
Interest payments	Depending on the offering of the CM	No interest payments for cash collateral	
Risk Management	Margining	Yes	No
	Limit	Voluntary, set by CM (or NCM)	Mandatory, set by ECC
	Prefunding	No collateralisation towards ECC but potentially towards CM	Collateralisation of pre-trade limit in advance with collateral accepted by ECC
	Collateral	Collected by CM (minimum: 30,000 EUR) CM accepted collateral	Deposited by DCP, only ECC-accepted collateral
	Default Fund Contribution	CM obligation	DCP obligation

DCP approved markets

The following markets have been approved by ECC for the DCP model:

Exchange	Product Name
BSP	Slovenian Power Spot (IT/ST)
EPEX SPOT	German Power Spot (IT IT1 ST) Belgian Power Spot (IT IT1 ST) Austrian Power Spot (IT IT1 ST) French Power Spot (IT ST) French Capacity Guarantees Swiss Power Spot (IT ST) Danish Power Spot (IT ST) Dutch Power Spot (IT IT1 ST) UK Power Spot (IT IT0 IT1 IT2 ST) Norwegian Power Spot (IT ST) Swedish Power Spot (IT ST) Finnish Power Spot (IT ST) Polish Power Spot (IT ST) European Guarantees of Origin
EEX	French Guarantees of Origin (primary auction) National Emission Trading System Certificates (nEHS) / nEZ
HUPX	Hungarian Power Spot (IT ST)
SEMOpX	Irish Power Spot (IT IT1 IT2 IT3 ST) Northern Irish Power Spot (IT IT1 IT2 IT3 ST)

ECC is continuously striving to extend the DCP model to further spot markets. An extension for certain gas spot markets is intended for the beginning of 2025.

DCP approved jurisdictions

The DCP model is only available to companies domiciled in one of the following countries:

European Union		Non-EU
Belgium,	Ireland	Switzerland
Denmark*	Latvia	United Kingdom
Estonia	Lithuania	
Finland	Netherlands	
France	Poland	
Germany	Slovenia	
Hungary	Sweden	

ECC is constantly expanding the list of DCP-eligible countries within the European Union respectively the European Economic Area.

* Acceptable legal forms in Denmark:

- public limited company (in Danish: *aktieselskab*)
- privat limited company (in Danish: *anpartsselskab*)
- partnership (in Danish: *interessentskab*)
- limited partnership (in Danish: *kommanditselskab*)
- an association with limited liability (in Danish: “forening med begrænset ansvar”)
- company with limited liability (in Danish: “selskab med begrænset ansvar”)

2. Admission as DCP Member & Fee Structures

DCP admission requirements

Admission by ECC constitutes a fundamental precondition for exchange trading for DCP members. It ensures that settlement, delivery and hedging of the transactions are secured by the clearing house.

The following requirements are necessary for admission by ECC:

Passing of the **ECC KYC assessment**

Opening a **bank account with a Connected Bank** (with a connection to ABN AMRO Bank)

Approval (or planned approval) **as a Trading Participant** for, at least, one ECC-approved spot market where the DCP membership model is available

The conclusion of a **balance group agreement** with the respective TSO (in case of power spot trading)

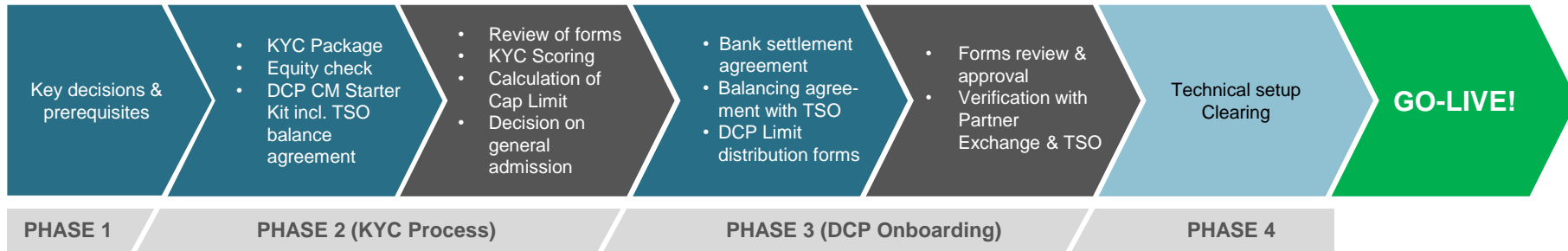
Company must be based in a **country approved** by ECC for DCP Clearing (please refer to slide 8)

Equity* of at least **EUR 50,000****

Contribution to the Clearing Fund (depending on the provided collateral)

*Equity incl. subscribed capital, capital reserves, retained income less any losses incurred during the year and less intangible assets
 **Increases of the subscribed capital during a given year shall be proven by means of the submission of the registration message.
 A DCP can increase the equity by means of bank guarantees or guarantees of a parent company accepted by ECC.

DCP admission process



- Actions for trading prospect
- Actions for ECC
- Actions for both, trading prospect and ECC

- PHASE 1 **Define the trading and clearing setup** best suited for your trading patterns with your Key Account Manager. This decision for a membership type will impact the onboarding forms and prerequisites you will need for trading.
- PHASE 2 Complete and submit the **KYC package** needed for the ECC KYC team to assess your business and to approve access to clearing. This also includes the analysis of the **equity** requirement. Additionally, you receive the ECC DCP CM Starter Kit including the ECC admission forms. These will already relate to your chosen clearing membership type. Please, **submit these forms for onboarding as DCP** (see next slide) to the ECC KYC team.
- PHASE 3 After successful admission acceptance, complete and submit the **DCP limit distribution forms**, which are relevant for the provision of collateral and distribution of limits to different markets (please refer to slide 23 & 24). In this phase it is also required to conclude a **settlement agreement with a Connected Bank** (see slides 30 et seqq.) and a **balance agreement with a TSO**.
- PHASE 4 Next, ECC will perform **the technical setup** in the Clearing Systems. Finally, ECC Member Readiness aligns with the Market Operations team of the respective exchange for a common launch date.

A complete overview on the admission process can be found on the ECC website: <https://www.ecc.de/en/access/dcp-clearing-members>.

ECC admission forms: Overview

PHASE 2 (KYC Process)

PHASE 3 (DCP Onboarding)

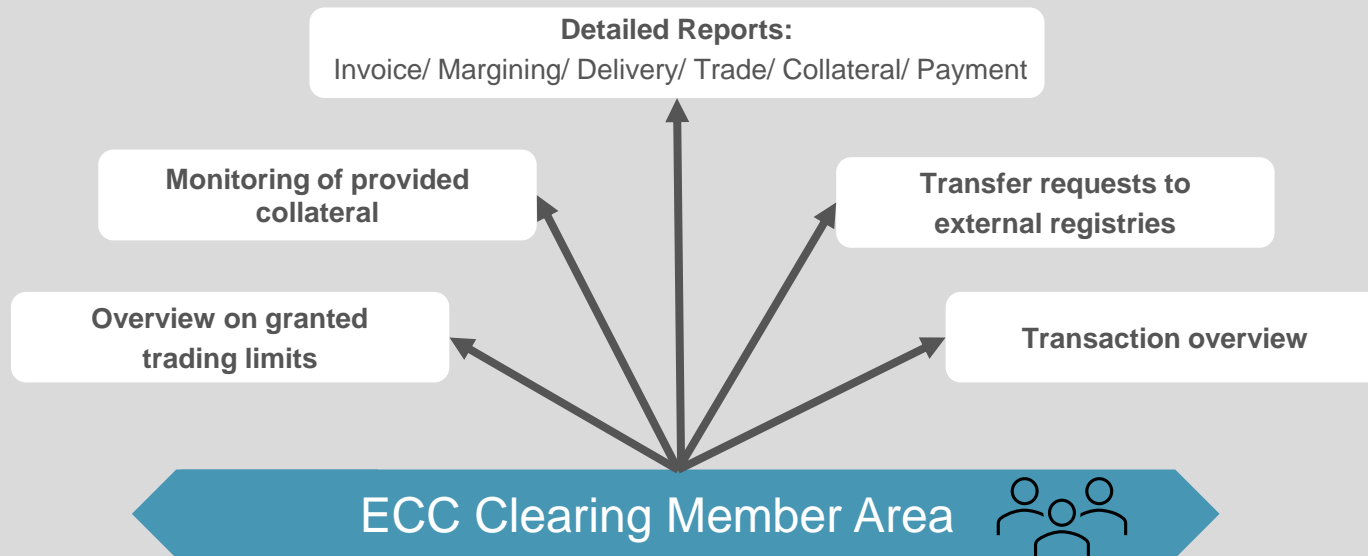
KYC	<ul style="list-style-type: none"> - GROUP KYC COMMON - GROUP KYC APPENDIX POWER and / or - GROUP KYC APPENDIX GoO
Supporting documents	<ul style="list-style-type: none"> - COMMERCIAL REGISTRY EXTRACT - (audited) FINANCIAL STATEMENTS from the last fiscal year (If no financial statement is available, business plan for the next 3 years) - SIGNATURE SCHEDULE (mandatory) - SHAREHOLDER CHART as requested within KYC Common 3.2.1
DCP On-boarding forms	<ul style="list-style-type: none"> - DCP01 Admission Form - CM02 Clearing Agreement
Technical forms	<ul style="list-style-type: none"> - TP07 VAT Details - T10s setup (not mandatory)
TP forms	<ul style="list-style-type: none"> - TP_[MARKET]_01a fulfilling trades physically and / or - TP_[MARKET]_01b fulfilling trades physically using a third party

DCP Limit Distribution forms	<ul style="list-style-type: none"> - O09 Limit Adjustment Form - O10 Cash Collateral Form
Connected Bank information (see slide 30 et seqq.)	<ul style="list-style-type: none"> - Payment information related to Connected Bank set-up - DCP CM Confirmation Letter

The admission forms are available in the most current version at <https://www.ecc.de/en/access/admission-forms>.

ECC Clearing Member Area

The ECC Member Area provides access to ECC's clearing system SMSS for your daily business operations with essential services.



Initially, each member receives at least one invoice user for the ECC Clearing Member Area. To register additional users please fill in the "T10s User Setup" admission form. Details on the functions of the ECC member Area are provided in the Member Area User Guide. Forgot your password? Please use the password reset function or contact memberreadiness@ecc.de or clearing@ecc.de

DCP fees

Disclaimer: This overview on pricing conditions is for information purposes only. The current conditions according to the ECC Price List always apply (<https://www.ecc.de/en/about-ecc/rules/price-list>).

Exchange	EXCHANGE FEES	Annual fees & variable transaction fees	
	VARIABLE FEES	ECC clearing fees for spot market according to ECC Price List	
ECC	ANNUAL FEE	<u>Two or more markets:</u> 12,500€ for several EUR spot markets 11,000€ for several GBP spot markets	<u>Single markets:</u> 9,000€ / 8,000€ for a single market 3,500€ for EPEX European GoO Auction 0 € for EEX French GoO Auction (fee waiver until 30 September 2024)
		DCP annual membership fees are payable yearly in advance . A membership can be cancelled with a 3-month notification period. Paid fees for full (not yet started) months will be reimbursed.	
	CASH/ BANK GUARANTEE MANAGEMENT	Cash collateral handling fee: EUR: 0.15 %* / GBP: 0.20 % Bank guarantee management fee: EUR: 0.15 %** / GBP: 0.20 % ECC does not pay interest on cash collateral provided by a DCP member.	
	LIMIT ADJUSTMENT FEE/ CASH COLLATERAL	Adjustment of limit preferences (per adjustment): 100€ / 70€* Increase/decrease of cash collateral (per occurrence): 100€ / 70€**	
	TECHNICAL FEES	No technical fees for DCP members	
Bank	BANK FEES	Individual bank fees depending on the bank	

* This fee will be waived for DCP members admitted exclusively for the EEX French GoO Auction until 30 September 2024.

**This fee is not charged to DCP members that use form O11 to increase/decrease collateral related to the EPEX French Capacity Auction and GoO auctions.

Any change in ECC's fees will be communicated **at least 6 weeks ahead of the change**.

3. Trading Limits & Collateral

DCP financial trading limits



Trading Limits

A DCP member may enter orders and execute trades as long as the exposures remain below imposed **financial pre-trading limits** (no quantity/ other limits).

Limits are transmitted by ECC to the exchange trading system(s). If a DCP member attempts to enter an order that increases its financial exposure above the limit granted, the order will be rejected.

The pre-trade limit ensures at all times that the financial obligations from past but not yet settled trades and open orders of the DCP can be fully covered by the deposited collateral.

Limits are set **separately for each market** a DCP member is active in. Trading limits can be viewed by the trading participant in the trading system.

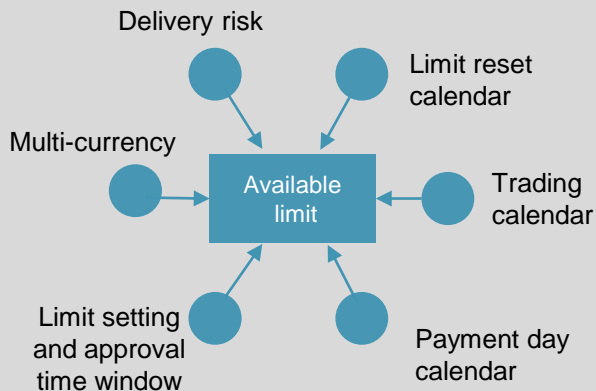
Trading limits are calculated with a **haircut on the exchange rate** when trading multiple currencies or when cross currency collaterals are held (e.g. EUR / GBP).

Interrelation of limit and collateral

Trade access requires the pre-deposit of collaterals with ECC to collateralise the preferred limits.

The provided collateral and the available limit do not necessarily have a 1:1 relationship. The required collateralisation for a certain limit is depending on the market specifications and the payment calendar:

Market properties influencing the limit calculation



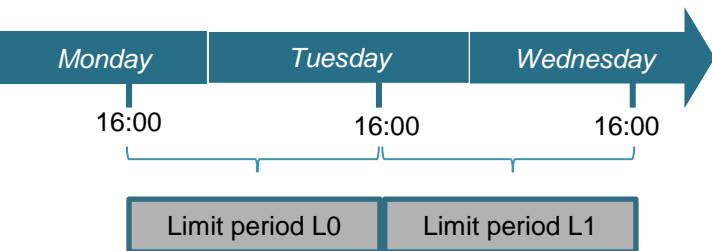
Initial determination of collateral requirement:

- 1 Based on the individual trading needs, the trading participant defines a limit amount for the respective spot market(s).
- 2 Next, the DCP member derives the corresponding total collateral amount which will be required to obtain the desired limit. The collateral amount requirement depends on the market specifics and the payment calendar. Your Key Account Manager and/or ECC can assist in calculating the required collateral amount.
- 3 If the trading participant is active on multiple markets, the DCP is asked to define a certain distribution (in %) of the total available limit to single markets.
- 4 The DCP member deposits collateral with ECC. ECC calculates the available limit(s) and transmits the limit to the exchange trading system according to the daily limit process.

DCP limit management

The DCP limit management is based on limit cycles that are aligned to the booking cut-off at 16:00 CET. During two consecutive ECC business days the following limit update process is followed by ECC:

(on weekends and public holidays different limit cycles may apply)



<p>16:00</p>	<p>Limit Reset: At 16:00 limit period L0 ends and a new limit period L1 begins, that lasts until the following day 16:00. Since the risk exposure from L0 is not known yet, the limits are reset in the trading systems to pre-fixed values. Two options exist for the limit reset: (a) The limit of the limit period L1 is set to 0 EUR for the moment. (b) The DCP member has defined a so-called Base Limit. The limit for the next limit period L1 is set to this Base Limit.</p>
<p>16:00 – ~18:00</p>	<p>New limit calculation: The outstanding risk exposure accumulated from transactions during the past limit period L0 is determined. If the DCP's exposure is smaller than the available collateral the remainder becomes available for trading limit distribution. The new limit is determined: (a) New limit = 0 + Excess collateral (b) New limit = Base limit + Excess collateral</p>
<p>~ 18:00</p>	<p>Limit update with unutilised limit from previous period The updated limit including the unutilised limit from the previous limit period is uploaded into the trading system.</p>
<p>~09:30 (D+1)</p>	<p>Limit update after successful financial settlement: In the morning of the next day, ECC checks if the payment related to outstanding financial exposure has been received on the ECC bank account. After successful payment was confirmed, the trading limit is updated again by adding resolved payment exposure from the successful settlement.</p>

Examples: Base Limit collateral requirements depending on calendar and market

EUR CONTINUOUS MARKET ON WEEKDAYS AND REGULAR WEEKENDS

- On the EUR Continuous market, 2 times the limit value is required to provide coverage on **weekdays**.
- Considering the payment calendar, on a regular weekend, from Friday to Monday, 4 times the limit value is requested as collateral.

Continuous	Exposure/ BaseTrading Limit	702,000
	Collateralisation	4
	7 days a week	2,808,000
	Business days only	1,404,000

EUR AUCTION MARKET ON WEEKDAYS AND REGULAR WEEKENDS

- On the EUR Auction market, **1 time** the limit value is required to provide coverage on weekdays.
- Considering the payment calendar, on a regular weekend, from Friday to Monday, **3 times** the limit value is requested as collateral.

Auction	Exposure/ BaseTrading Limit	702,000
	Collateralisation	3
	7 days a week	2,106,000

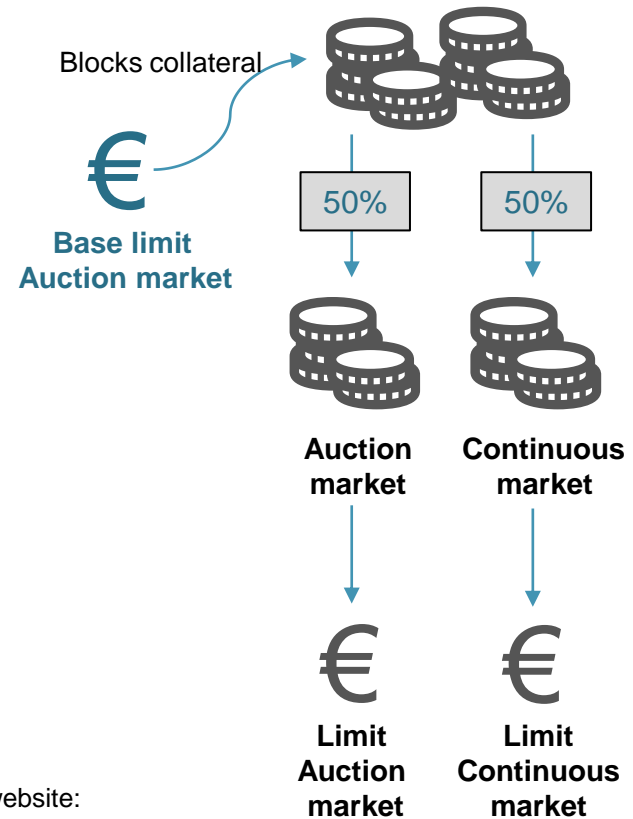
How to allocate collateral?

A DCP member can freely decide how to split up provided collateral. DCPs do so by defining an **(optional) base limit** and with **collateral distribution keys**.

The **Base Limit** is the limit a DCP member **at least** would like to have available **at all times for a particular market**.
 This is of special importance for the time after the booking cut at 16:00.

The **collateral distribution keys** define on which markets all collateral not blocked by the base limit is used.
 The collateral distribution keys **have to add up to 100%**.

DCP member decides how to split up collateral (via form O09)



HOW?



Form O09

(Please retrieve the most current form from the ECC website:

<https://www.ecc.de/en/access/admission-forms>)

Accepted collateral for limit prefunding

Accepted collateral for limit prefunding

CASH COLLATERAL (EUR/ GBP)

- ECC accepts EUR and GBP as cash collateral
- Request to provide additional cash or retrieve back cash is possible on every ECC business day (D) by email to direct.clearing@ecc.de via form DCP 010



O10



BANK GUARANTEE (EUR/ GBP)



- A DCP has the possibility to provide a guarantee from a bank accepted by ECC as guarantor.
- Available guarantors are published on the ECC website. Please refer to [Bank Guarantees as Collateral](#).
- A guarantor bank cannot be the settlement bank of the DCP member.
- For bank guarantees there is a bank-guarantee-only collateral limit of currently 40 mn EUR. i.e., trading limits up to 40 mn EUR can be covered by bank guarantees only. For trading limits exceeding 40 mn EUR, the excess amount must be backed by a minimum of 50% in cash collateral. For example, if a client wants to deposit 50 mn EUR as collateral with the maximum guarantee amount possible, the client needs to deposit a guarantee valuing 45 mn EUR and 5 mn EUR cash collateral.

A DCP member can view provided collateral funding via the login in the [ECC Member Area](#).

Default Fund contribution for DCP members

ECC has in place a **Default Fund** that serves as additional layer of protection to members in case of extreme but plausible market conditions. Each Clearing Member – and that includes DCP members – contributes to the Default Fund in proportion to its risk exposure.

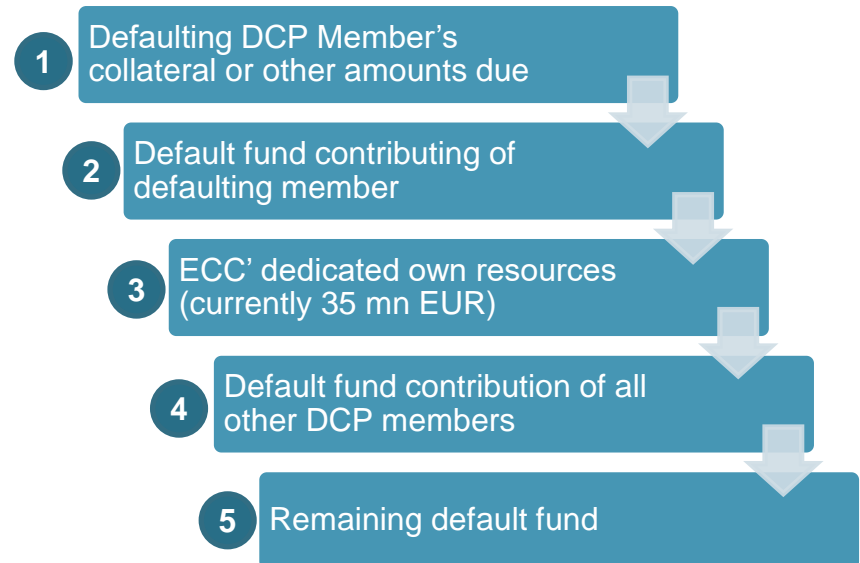
Default Fund Contribution for DCP Members

- In case only cash is provided as collateral and if the member only maintains a trading limit in markets without delivery risk* **no Default Fund contribution** is required
- In case the client provides bank guarantees as collateral or if the client is active on a market with delivery risk*, the contribution to the Default Fund is defined with at least **4% of the total trading limit**
- For the Default Fund, only cash (EUR/GBP) contributions are acceptable
- The required contribution to the Default Fund is updated monthly
- ECC performs daily stress tests if provided collateral is sufficient to comply with ECC risk models

* Current DCP eligible markets with delivery risk (i.e. where ECC's physical nomination can be cancelled by the network operator):
UK Power Spot (IT|IT0|IT1|IT2|ST)

When and how is the ECC Default Fund used?

In case of a DCP member's default, ECC uses resources in the following order to cover for potential losses:



DCP collateral cap (“Cap Limit”)

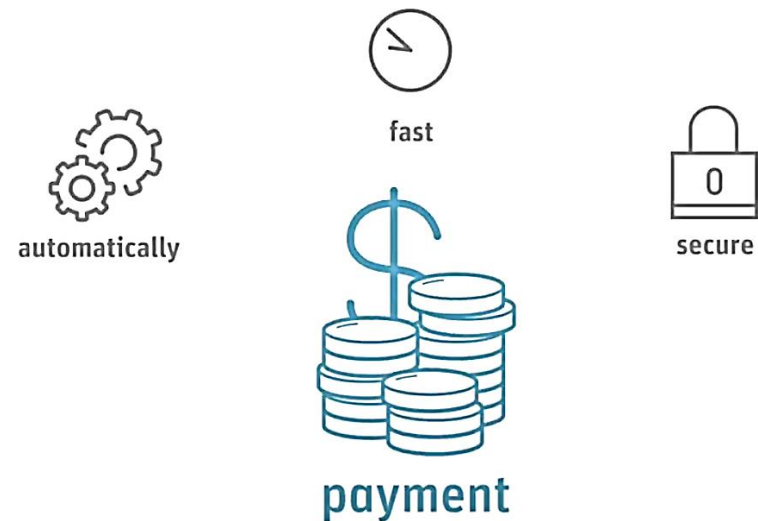
- The maximum total limit granted to a DCP member is limited by the **Cap Limit**. The Cap Limit is determined based on the member’s overall risk profile.
- Even if a DCP member deposits more collateral than the Cap Limit, the maximum collateral considered for the trading limit calculation is the amount of the Cap Limit, not more.
- ECC derives the respective Cap Limit on the basis of the applicant's financial strength and internally defined credit-risk-based criteria.
- The Cap Limit is calculated as part of the KYC process and reassessed once a year for each member.

4. Payment (Connected Banks) & VAT

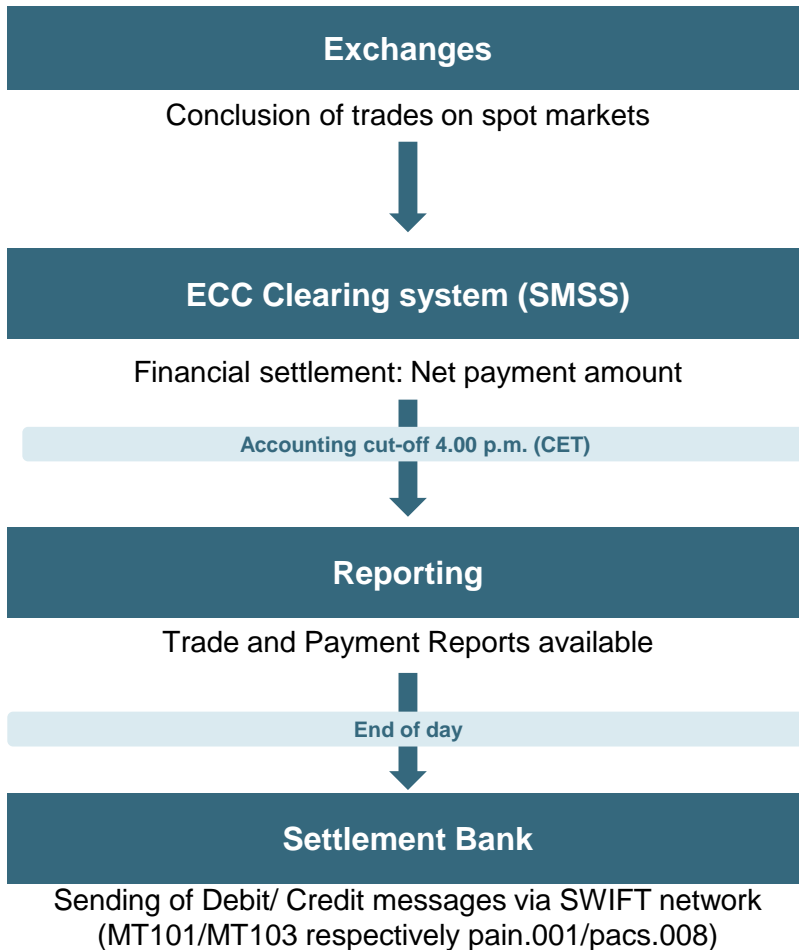
Payment (Financial settlement)

ECC performs the financial settlement for all energy transactions contracted on ECC's partner exchanges BSP, EPEX SPOT, HUPX, SEMOpx and EEX.

The payment and delivery have strict timelines. On each business day ECC initiates the collections and payments from/to the members' bank accounts. Financial settlement at ECC comprises both EUR and GBP payments.



Financial settlement process



- ECC established a daily booking cut at **16:00:00 (T+0)**
- All trades concluded before the booking cut are financially settled in the morning of the following T2 operating day, all other trades are settled one day later.
- The commodity amounts of all trades are netted to one net payment amount per DCP member and Settlement Bank and are reported in daily Payment Reports available in the ECC Member Area.
- **EUR** payments are expected to be credited to ECC's account until **8:00 a.m. (T+1) CET** on T2 operating days. Payments in **GBP** need to be credited to ECC's bank account until **9:00 a.m. (T+1) CET** on UK business days.
- Payments to the DCP member will be credited after successful debiting process

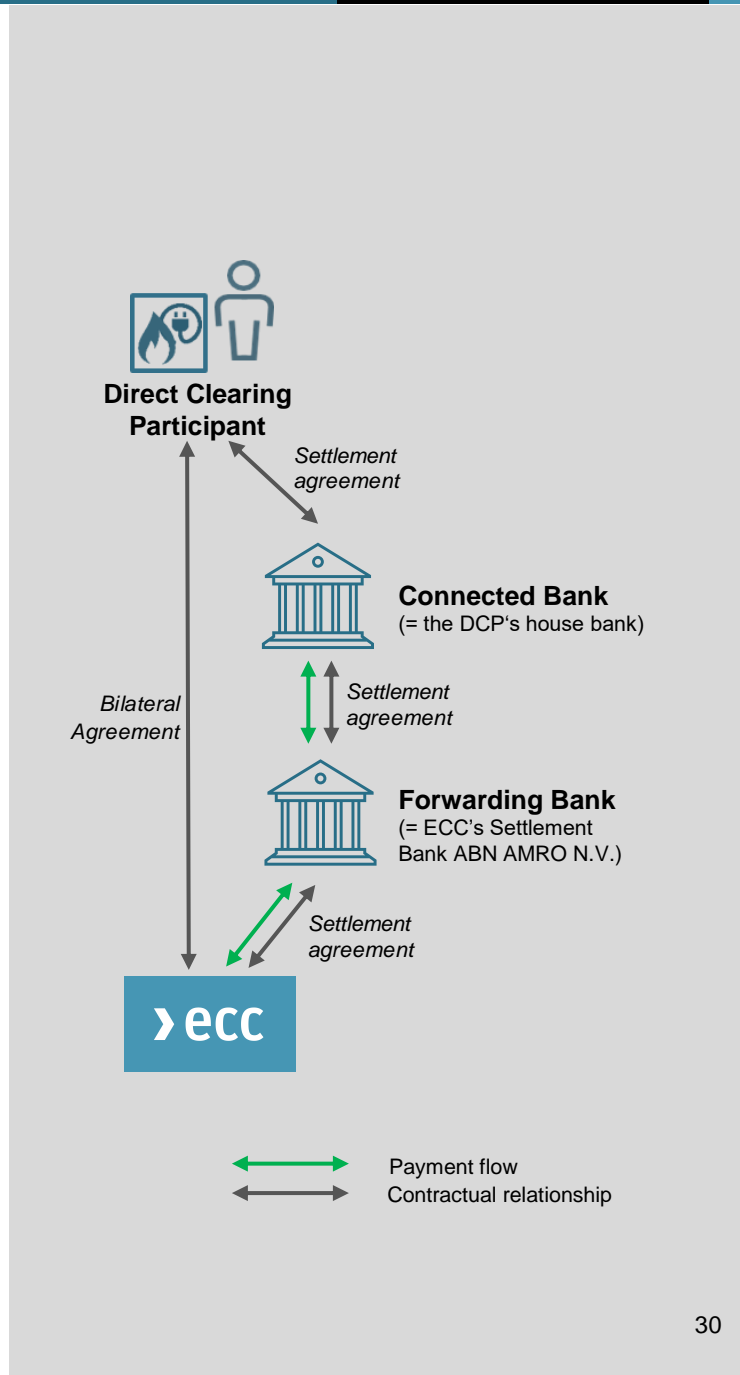
DCP Connected Bank model

For the settlement of payments for purchase/sales transactions on exchange respectively for the provision of cash collateral, the DCP member needs to maintain an account with a Settlement Bank which will be used exclusively for clearing with ECC. This Settlement Bank (**Connected Bank**) needs to fulfill the following requirements:

- Connection with ECC's Settlement Bank **ABN AMRO Bank** (ABNANL2A)
- For EUR payments: The Connected Bank should also be a direct participant of T2 (EUR central bank payment system).
- For GBP payments: The Connected Bank must be able to receive and issue CHAPS payments.

ABN is connected to **>300 other banks worldwide**.

Agreements between the DCP member and the Connected Bank need to be negotiated individually.



DCP Connected Bank model SWIFT messages



Payments between ECC and the DCP member via the Connected Bank infrastructure is performed by using SWIFT messages that are generated from the ECC clearing system and sent via ECC's Settlement Bank ABN AMRO Bank (Bank Identifier Code: ABNANL2A) to the Connected Bank of the DCP.

MT101 Request for Transfer

(Payments from the DCP member towards ECC)

Settlement of debit payments from the DCP member to ECC is performed via SWIFT message type MT101 ("Request for transfer"). The MT101 Request for transfer SWIFT message is a request to the Connected Bank to transfer funds from the DCP member's account to the account held by ECC (ECC AG is the initiator; ABN AMRO Bank is the forwarding bank; the connected bank is the recipient).

Content of MT101 messages

EUR payments:

The content of such MT101 message resembles the following: "please transfer amount x from Member Account y; via urgent SWIFT; to ECC Settlement Account held at ABN AMRO Bank".

GBP payments:

The content of such MT101 message resembles the following: please transfer amount x from Member Account y; as CHAPS payment to ECC settlement account held at ABN AMRO Bank UK

Prerequisite

DCP member needs to provide **debit authority** to ECC

4 Steps for Connected Bank onboarding



4 Steps for Connected Bank onboarding

STEP 1a: Choose a Connected Bank

As a first step, please check together with the ECC Direct Clearing Team if your preferred bank fulfills the Connected Bank prerequisites:

EUR Settlement

- Preferred bank is a direct T2 participant
- BIC codes of the preferred bank are connected to ECC's payment bank ABN AMRO Bank N.V.

GBP Settlement

- Preferred bank can receive and issue CHAPS payments
- BIC codes of the preferred bank are connected to ECC's payment bank ABN AMRO Bank N.V.

To perform these checks, please provide the following information by e-mail to direct.clearing@ecc.de:

- the **BIC code of the bank where you (plan to) maintain your bank account** and
- the **BIC of their main branch* or head office***

Once ECC has confirmed that the requirements are met by your preferred bank, ECC will send you the **DCP CM Confirmation Letter** (see next slide for more information).

*Sometimes ABN is only connected to the main branch or head office of a bank. When this is the case, ECC may request you to contact your bank to see if the SWIFT messages are processed centrally or are being forwarded. Would this be the case, we can also proceed with the setup.

4 Steps for Connected Bank onboarding

STEP 1b: DCP CM Confirmation Letter

Direct Clearing Participant Clearing Member Confirmation Letter

Once a suitable Connected Bank has been found, you will be provided with a DCP CM Confirmation Letter.

ECC will initiate collections and payments between the blocked ECC account **at ABN AMRO Bank** and **your Connected Bank account**. The Confirmation Letter assures the payments are irrevocable. The DCP CM Confirmation Letter needs to be **signed by you** and **provided via e-mail** to memberreadiness@ecc.de.

4 Steps for Connected Bank onboarding

STEP 2: Opening a settlement account (1/2)

The setup of **MT101 Request for transfer service** is mostly used between large corporates and is not widely known even with bank clerks. If the setup is not known with your own account manager, we advise to **ask for a cash management specialist** for the setup of MT101 Request for transfer service on your account.

Even if a bank maintains a Connected Bank relationship to ABN AMRO Bank, it is not always assured that the Connected Bank offers this service to each customer and/or allows third parties to issue payment requests or processes the payment requests according to the timeline requested by ECC (see next slide). Therefore, it is advisable to ask your bank's cash management specialist for the MT101 Request for transfer service before entering a new relation/opening an account.

Before the account opening, please also confirm the following requirements:

- The account is on the name of the applicant
- The account will be used exclusively for ECC clearing
- Third party (ECC AG) will be allowed to debit the account
- The MT101 Request for transfer messages can be processed automatically or without delay (see timings on the next slide)
- The MT940/942 reporting service is activated
- For GBP: the account allows CHAPS payments

4 Steps for Connected Bank onboarding

STEP 2: Opening a settlement account (2/2)

Requirement for timely payment

ECC operates according to a daily settlement cycle with a **booking cut at 4:00 p.m. CET**. All trades concluded before the booking cut are settled in the morning of the next ECC business day. The payment process has **strict timelines**:

- In case of a net debit exposure of a DCP member, ECC generates an urgent debit payment instruction (MT101 Request for transfer) at the end of the business day (6:00 p.m. CET) with value date of the next business day.
- ECC requires that the payment is processed successfully **before 8:00 a.m. (EUR) / 9:00 a.m. (GBP) CET**. Ideally, the payment request is already processed overnight and without manual intervention (Straight-Through-Processing) to ensure the timely settlement.

ECC performs test payments to check whether the Connected Bank designated by the DCP member meets the requirements related to ECC deadlines (STEP 4).

4 Steps for Connected Bank onboarding

STEP 3: Technical setup

Please provide the Financial Settlement & Invoicing Team (direct.clearing@ecc.de) a fulfilled "**bank account**" sheet which you will receive after finding a BIC. The "bank account" sheet shall be filled with the following account information:

- Client Details (IBAN, BIC, Address, Currency)
- Tag50 format (could be IBAN or BBAN)
- MT101 agreement
- Tag25 format (could be IBAN or BBAN)

ABN AMRO Bank completes the account setup based on the completed "bank account" sheet.

More about "Tag 25" and "Tag 50":

ABN AMRO Bank and the Connected Bank will need to make sure that the SWIFT fields "Tag 25" and "Tag 50" **are the same on both ends**. If there is a mismatch, the payment and reporting messages cannot be exchanged. In case your bank asks for a Tag 25 / Tag 50 suggestion, please propose the IBAN.

5 Steps for Connected Bank onboarding

STEP 4: Test payment

Once the account set-up is completed by ABN AMRO Bank, ECC and ABN AMRO Bank will make test payments to verify that the bank account is set up correctly and to test whether payments made through the Connected Bank specified by the DCP member meet the requirements in relation to ECC's settlement deadlines.

First test payment: Debit Instruction

- ECC will initiate a transfer of a small amount of money from your Connected Bank account (**penny test**). The money will be transferred back to your bank account as part of the test procedure. The customer must ensure that the account is sufficiently funded before making the first test payment.
- It should be noted that the Connected Bank may charge fees.
- After a successful debit test payment, further internal setup steps take place.

Second test payment: Credit Instruction

- After the internal setup steps have been completed, the credit test payment can take place.
- After a successful credit test payment, the account setup is complete.

ECC will confirm the technical set-up after the successful test payment period. The account will then be ready to be used for the financial settlement with ECC.

5. Physical Settlement

ECC develops unique solutions for the energy markets' physical needs

- As the central counterparty, ECC steps into the delivery chain and ensures the physical settlement of the traded product.
- ECC is the expert in the physical settlement of grid-bound energy products (power and natural gas) and related products (emission allowances and Guarantees of Origin).
- ECC is connected with more than 30 Transmission Services Operators (TSO's) and various registries in Europe.
- ECC's nomination processes guarantee an accurate and reliable transmission of power and gas, relying on a stable infrastructure and 24/7 support for our customers.
- ECC is involved in various market coupling projects and actively contributes to the vision of an integrated cross-border wholesale energy market in Europe.

ECC develops unique solutions for the energy and commodity markets' physical needs

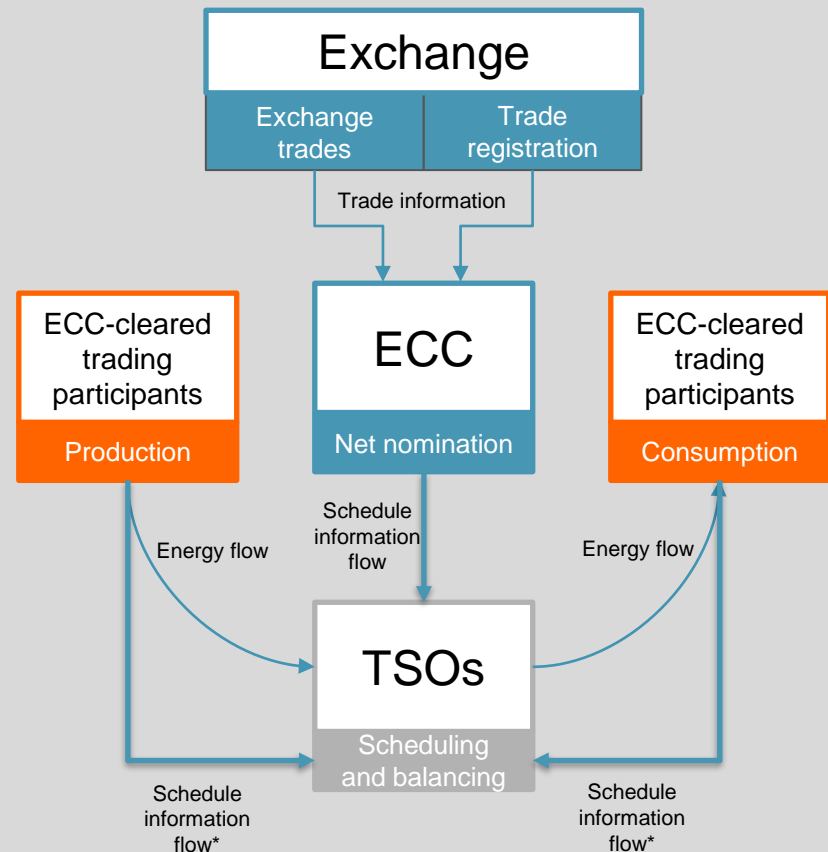
- ECC's nomination processes guarantee an accurate and reliable transmission of power, gas, EU Emission Allowances (EUAs) and Guarantees of Origin (GoOs) relying on a stable infrastructure and **24/7 support** for our customers
- ECC sends nominations to the relevant (power or gas) grid operator to initiate the physical delivery
- For EUAs and GoOs delivery is done by a booking process in registries

Preconditions and special capabilities for Physical Settlement:

ECC	Members
<ul style="list-style-type: none"> • Balancing agreements with all relevant TSOs • Direct technical interface with TSOs • Ability to always provide the necessary nomination data format and granularity, ability to adapt to the necessities of different backend systems • For EUAs: Hold the necessary accounts within the Union's Registry to receive and deliver emission certificates • With Grexel as a subsidiary, EEX Group holds inhouse expert knowledge in registries 	<ul style="list-style-type: none"> • Balancing agreements with the TSO in the market area where participants want to trade • Alternatively, permission to use a third party account • In some market areas: Ability to send nominations to the TSOs (additionally to the nominations sent by ECC) • For EUAs: Hold an account at the Unions Registry • For GoOs: Hold an account at the National Registry

Nomination process (Power or natural gas)

- Trade information is gathered from the order book trading on exchange or Trade Registration deals.
- ECC aggregates nominations per market participant (MP) and delivery hour for the respective TSO into the nomination schedules.
- TSO confirms the correct matching of nominated schedules by both the MP and ECC as its counterpart. If a mismatch occurs the TSO sends an alarm message.



*in some markets only

Nomination & Scheduling

- In the market areas France RTE, Nordic Markets (DK, FI, NO, SE), UK Elexon, SEMO (EIRGRID, SONI), and in the natural gas market, single-sided nomination is used. This means ECC is authorized to fulfil the physical nomination on behalf of each trading participant.
- In all other cases, the trading participant also has to submit a schedule.
- ECC nominates the net position in the relevant product to the respective TSO within the timeframe specified.

ECC Scheduling – General Process

1. Trade Confirmation



2. Buy = Sell quantity



3. Successful trade file import



4. Generate & transmit schedule



5. TSO ACK message



6. TSO confirmation



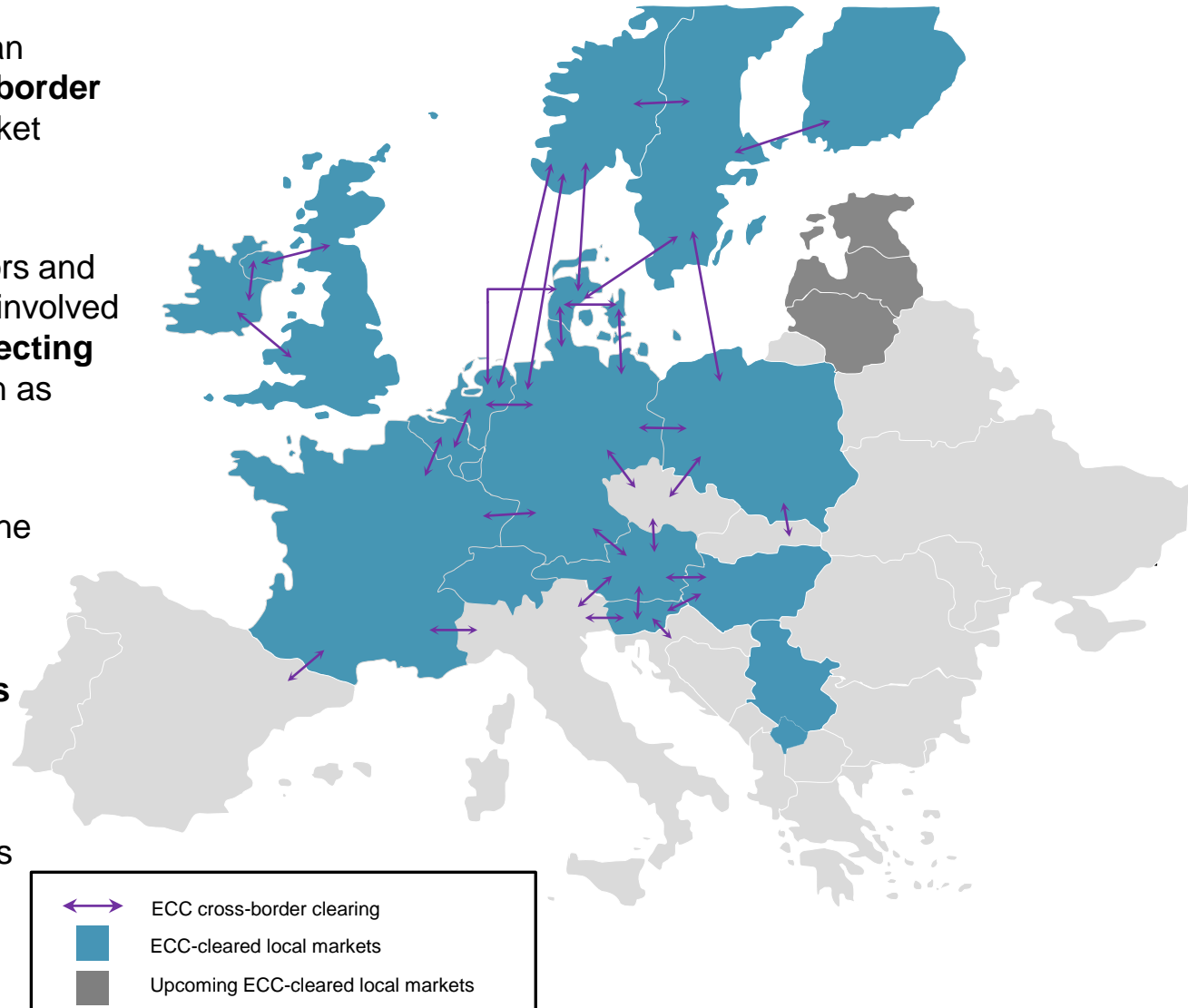
7. Trades nominated successfully



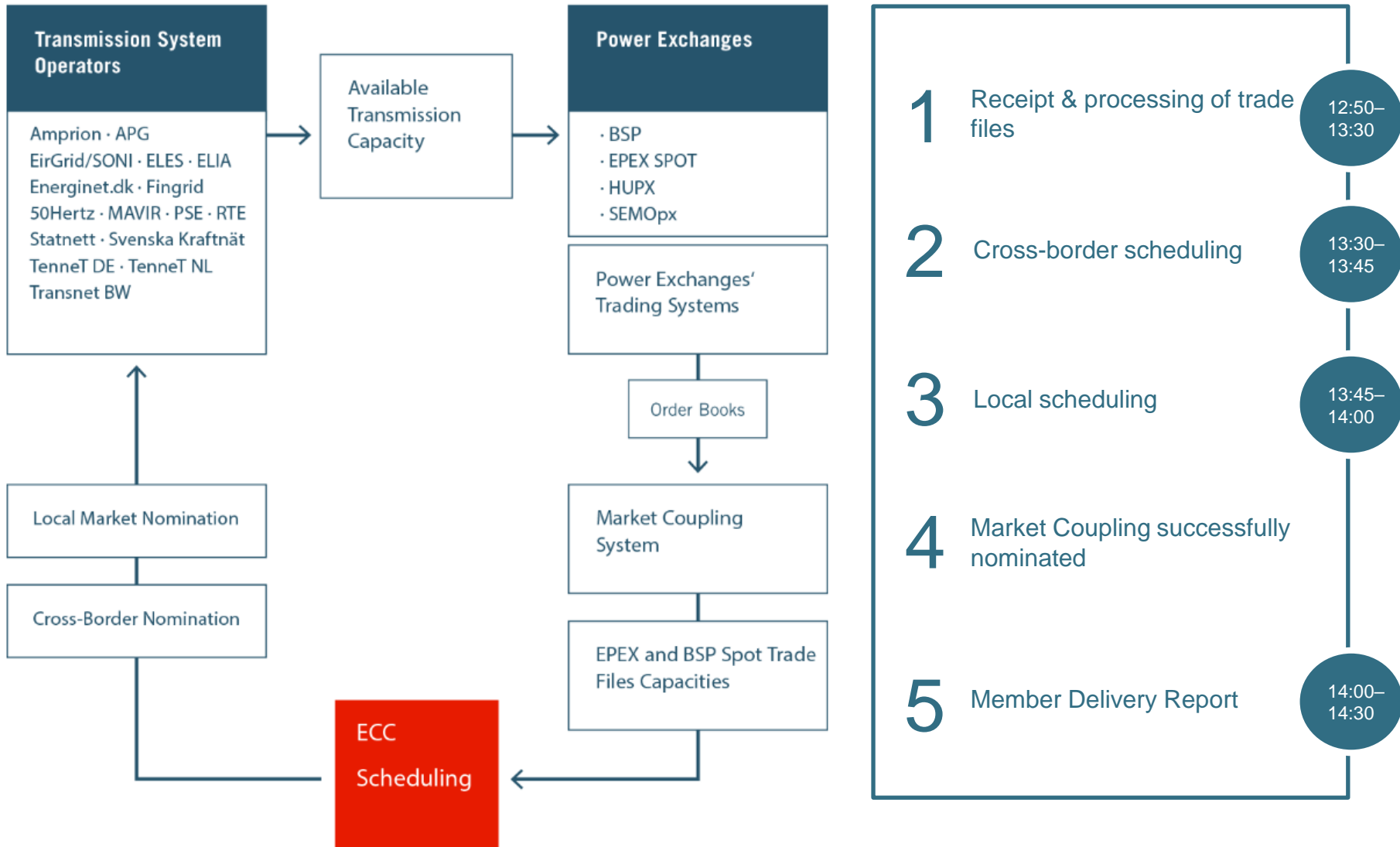
8. TP receives Delivery Report

Market Coupling in the Power Markets

- ECC supports the vision of an integrated European **cross-border wholesale power spot** market
- Together with our partner exchanges, network operators and trading participants, ECC is involved in various projects **for connecting European markets** – known as Market Coupling
- Market Coupling optimizes the allocation of cross-border capacities thanks to a coordinated and **market-based calculation of prices and flows** between countries, thus supporting **security of supply** and harmonized wholesale prices



Nomination & Scheduling | Market Coupling



Value-added tax specifics for physical settlement

ECC subsidiary based in Luxembourg is part of the physical delivery contract chain:

The Luxembourg-based ECC subsidiary **European Commodity Clearing Luxembourg S.à r.l.** steps into the delivery process as an additional contractual partner in respect to the physical deliveries of commodities (power and natural gas) and other services (transfer of certain certificates).

The ECC AG in Leipzig remains still the Central Counterparty for all risk management and operative processes.

- Delivery and fees for Luxembourg-resident companies or for a Luxembourg-based subsidiary involved in the trading process will be charged with the statutory VAT in Luxembourg.
- Deliveries in the Norwegian market area will be charged with the statutory VAT in Norway.
- **All other trading participants will not be charged VAT** for positive nor negative price trades due to the circumstances of the Reverse Charge Mechanism.

DCP Contacts

Direct Clearing Team

For all questions concerning DCP processes:
limit, collateral, payment and invoicing, member and
settlement bank management



+49 341 24680-444



direct.clearing@ecc.de

available from 7:30 a.m. to 7:00 p.m. CET

Member Readiness Team

For onboarding related questions;
in particular general questions related to the
admission process and questions concerning
admission phase 2 (see slide 13)



+49 341 24680-261



memberreadiness@ecc.de

available from 9:00 a.m. to 6:00 p.m. CET

Physical Settlement

For questions concerning physical delivery



+49 341 24680-345



physical-settlement@ecc.de

Available 24 hours, 7 days a week