French registry and auctions of Guarantees of Origin
Paris, 08 February 2022
1. Introduction

2. French Auctions characteristics
   A. Overview on Auction Process
   B. 2022 auctions calendar
   C. Auction algorithm overview

3. Auction results

4. Admission process
Power guarantees of origin
Role of EEX as registry and auction operator

Issuing Body in France since 2013
- Designated by the French Ministry of Energy (DG Energy and Climate) and renewed end of 2018 for 5 years
- Hold the registry for renewable GOs and CHP GOs in France (issuance, transfer, cancellation of GOs)

Member of the Association of Issuing Bodies (AIB) since 2013
- French GOs can be exported to AIB members domain and French account holders could import GO
- EEX takes part actively in the development of the mechanism at an European level
- GOs issued by EEX meet the EECS standard

Improvement of the mechanism thank to a close collaboration with the French Ministry of Energy
- GO: the only instrument to trace electricity from renewable energies
- Implementation of the residual mix to better inform customer and avoid green attributes double counting
- More control on GOs issuance, transfer & cancellation

Mandated by the French State to organize the GO auction
- Auction of GOs issued and selected by the French State (GO from subsidized production devices)
- EEX is organizing auctions since September 2019
French GOs in numbers

91,988 GWh
Issued and certified GOs in France in 2021

+17%
Growth of cancellation in France between 2020 and 2021 (49 TWh vs 57 TWh)

50,378 GWh
Traded on the EEX French GO Registry in 2021 (with 34,162 GWh from Auctions)

32
Trading participants
From 11 countries
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French Auctions characteristics

1. GOs from renewable production devices that receive support, classified according to 12 regions and 5 technologies (hydro, solar, wind onshore, thermal, marine energies)

2. Monthly Auction dedicated to one production month (important as mandatory matching between consumption month and production month in France since January 2021)

3. Production of M-3 is auctioned in Month M (GO validity = 12 months)

4. A single seller, the French State
   Multiple buyers

5. Pay-as-Bid Auction
   In-house algorithm that enables to bundle liquidity while allowing specificities matching:
   - bids on all technologies / all regions, specific regions, specific technologies or a specific couple technology/region
   - Possible to indicate preferences for specific production devices

6. Securization of transactions with a clearing house (ECC) with or without clearing member
Overview on Auction Process

- **Auction Day -10**
  - **Auction Day -7**
    - 1st Wednesday
- **Auction Day -2**
- **Auction Day -1**
- **Auction Day**
- **Auction Day +1**
- **Auction Day +2**

### Submitting bids
- **10:00 CET**
  - Process begins
- **10:00 CET**
  - Order reception
- **16:00 CET**
  - Gate closure

### Modification of Trading Limits
- **Modification of Trading Limits DCP model**
- **Modification of Trading Limits NCM model**

### Payment & Delivery
- **ECC proceeds to settlement of invoices with clearing banks**
- **EEX allocates Guarantees of Origin to members on the registry according to auction results**
- **Transaction / transfers have to be approved by receiving party**

### GOs published on the Powernext Auction Platform
- **ECC sends daily cash limits to EEX**

### Auction Days
- **Auction Day -10**
- **Auction Day -7**
  - 1st Wednesday
- **Auction Day -2**
- **Auction Day -1**
- **Auction Day**
- **Auction Day +1**
- **Auction Day +2**

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## 2022 French Auctions Calendar

<table>
<thead>
<tr>
<th>Auctioning month</th>
<th>Production month</th>
<th>Opening of Order Book</th>
<th>Closure of Order Book</th>
<th>Modification of cash trading limits</th>
<th>Order Matching</th>
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</thead>
<tbody>
<tr>
<td>January 2022</td>
<td>October 2021</td>
<td>12/01/2022 10:00 AM</td>
<td>19/01/2022 10:00 AM</td>
<td>18/01/2022 Tuesday 4:00 PM</td>
<td>19/01/2022 12:00 AM</td>
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<td>November 2021</td>
<td>09/02/2022 10:00 AM</td>
<td>16/02/2022 10:00 AM</td>
<td>15/02/2022 16/02/2022</td>
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<tr>
<td>March 2022</td>
<td>December 2021</td>
<td>09/03/2022 10:00 AM</td>
<td>16/03/2022 10:00 AM</td>
<td>15/03/2022 16/03/2022</td>
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<td>April 2022</td>
<td>January 2022</td>
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<td>19/04/2022 20/04/2022</td>
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</tr>
<tr>
<td>May 2022</td>
<td>February 2022</td>
<td>11/05/2022 10:00 AM</td>
<td>18/05/2022 10:00 AM</td>
<td>17/05/2022 18/05/2022</td>
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<td>June 2022</td>
<td>March 2022</td>
<td>08/06/2022 10:00 AM</td>
<td>15/06/2022 10:00 AM</td>
<td>14/06/2022 15/06/2022</td>
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<tr>
<td>July 2022</td>
<td>April 2022</td>
<td>13/07/2022 10:00 AM</td>
<td>20/07/2022 10:00 AM</td>
<td>19/07/2022 20/07/2022</td>
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<tr>
<td>August 2022</td>
<td>May 2022</td>
<td>10/08/2022 10:00 AM</td>
<td>17/08/2022 10:00 AM</td>
<td>16/08/2022 17/08/2022</td>
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<tr>
<td>September 2022</td>
<td>June 2022</td>
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<td>21/09/2022 10:00 AM</td>
<td>20/09/2022 21/09/2022</td>
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<tr>
<td>October 2022</td>
<td>July 2022</td>
<td>12/10/2022 10:00 AM</td>
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<td>18/10/2022 19/10/2022</td>
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<tr>
<td>November 2022</td>
<td>August 2022</td>
<td>09/11/2022 10:00 AM</td>
<td>16/11/2022 10:00 AM</td>
<td>15/11/2022 16/11/2022</td>
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<tr>
<td>December 2022</td>
<td>September 2022</td>
<td>07/12/2022 10:00 AM</td>
<td>14/12/2022 10:00 AM</td>
<td>13/12/2022 14/12/2022</td>
<td></td>
</tr>
</tbody>
</table>
Auction algorithm overview
In house designed optimization algorithm

Maximize the revenues dedicated to the energy transition:
- price is the main criteria

Market participants flexibility:
- Possibility to select multiple orders (50 orders per auction)
- Possibility to specify all GOs, only technology or only a region or a couple of both
- Possibility to select production devices (20 preferences per order)

Increase competition and ensure equity between participants:
- All orders competing
- In case of equivalent bids: allocation with a pro rata of the initial asked volume
Auction algorithm overview
Different type of orders

Simple orders:

- **Specific simple orders**: volume/price concerning a pairing of region/technology + expression of preference for particular devices is possible

- **Generic simple orders**: volume/price concerning a whole region, a whole technology, or all regions and all technologies

Multiple Orders:

Combination of simple orders with different prices, but all for the same volume.
**Auction algorithm overview**

**Production device preferences**

In order to indicate preferences, the Market participant has to:

1. Make an order specifying a region and a technology
2. Precise the name of the production device if GOs are available
3. Choose at most 20 preferences per order
4. No need to classify the preferences (there is no specific rank)

➢ First, the algorithm maximizes the revenue thanks to a mathematical optimization
➢ Then, allocation of GOs for all orders accepted in descending orders (according to price)
➢ The allocation of GOs taking into account of preferences is the last step of the algorithm

<table>
<thead>
<tr>
<th>Orders</th>
<th>Price</th>
<th>Volume</th>
<th>Region</th>
<th>Techno</th>
<th>Preferences</th>
<th>GOs available</th>
<th>Device 1</th>
<th>Device 2</th>
<th>Device 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order 1</td>
<td>2€/GO</td>
<td>10 GO</td>
<td>PACA</td>
<td>Solar</td>
<td>Device 1  Device 2  Device 3</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Order 2</td>
<td>1.5€/GO</td>
<td>5 GO</td>
<td>PACA</td>
<td>Solar</td>
<td>Device 1  Device 2  Device 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

→ Allocation of GOs

<table>
<thead>
<tr>
<th></th>
<th>Device 1</th>
<th>Device 2</th>
<th>Device 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order 1 allocation</td>
<td>10 GO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order 2 allocation</td>
<td></td>
<td>5 GO</td>
<td></td>
</tr>
</tbody>
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Auction results

- Since April 2021 all GOs are sold during each auction
Auction results

- Price references are published after each auctions, increasing market transparency
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Admission process

Registry Admission (3 weeks at reception of valid documents):

- Commercial register extract (less than 3 months old) *
- The Articles of Association *
- Powers of Attorney of the signatory (if not already included in the commercial register extract) *
- A notarized copy of the ID card/passport of the signatory
- The last 3 annual reports / Business Plan otherwise
- VAT certificate
- Standard Terms and Conditions: please send one original version per post
- G01 form
- KYC Registry form

* if the original document is not in English, French or German, please also provide a translation in one of those 3 languages
Admission process

**Auction Admission forms (around 3 months):**
- Trading Agreement: please send two originals per post
- KYC Auction form

**ECC forms:** to chose one of the model below

<table>
<thead>
<tr>
<th>Non-clearing-members model - NCM</th>
<th>dcp-clearing-members model - DCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCM01 (one original version to be sent per post)</td>
<td>DCP01 (one original version to be sent per post)</td>
</tr>
<tr>
<td>NCM02 (3 original versions to be sent to your Clearing Member)</td>
<td>CM02 (3 original versions to be sent per post)</td>
</tr>
<tr>
<td>TP07 – VAT form</td>
<td></td>
</tr>
<tr>
<td>TP_03 : GO Auction admission request</td>
<td></td>
</tr>
</tbody>
</table>
## Fees for transactions & admissions

<table>
<thead>
<tr>
<th>Transaction Fee</th>
<th>Amount (€) [without taxes]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issuance</td>
<td>0,01 € / MWh</td>
</tr>
<tr>
<td>Import</td>
<td>0,01 € / MWh</td>
</tr>
<tr>
<td>Transfer / Auction fee</td>
<td>0,005 € / MWh Paid by the buyer</td>
</tr>
<tr>
<td>Export</td>
<td>0,005 € / MWh</td>
</tr>
<tr>
<td>Cancellation</td>
<td>0,01 € / MWh</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Fees*</th>
<th>Amount (€) [without taxes]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership Registry</td>
<td>1 000 €</td>
</tr>
<tr>
<td>Membership Auction</td>
<td>2 000 €</td>
</tr>
<tr>
<td>Registration of Production Device</td>
<td>10 €</td>
</tr>
</tbody>
</table>

* All annual fees are payable once per year and are not prorated
Contact:

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Thank you for your attention!