

Auction use case 5

Revision 1

Repowering of an existing power plant

DISCLAIMER

This document provides different fictive examples, so-called use cases, related to the Capacity Remuneration Mechanism being developed in Belgium. It has, as sole purpose, to explain the Functioning Rules and its annexes by means of examples.

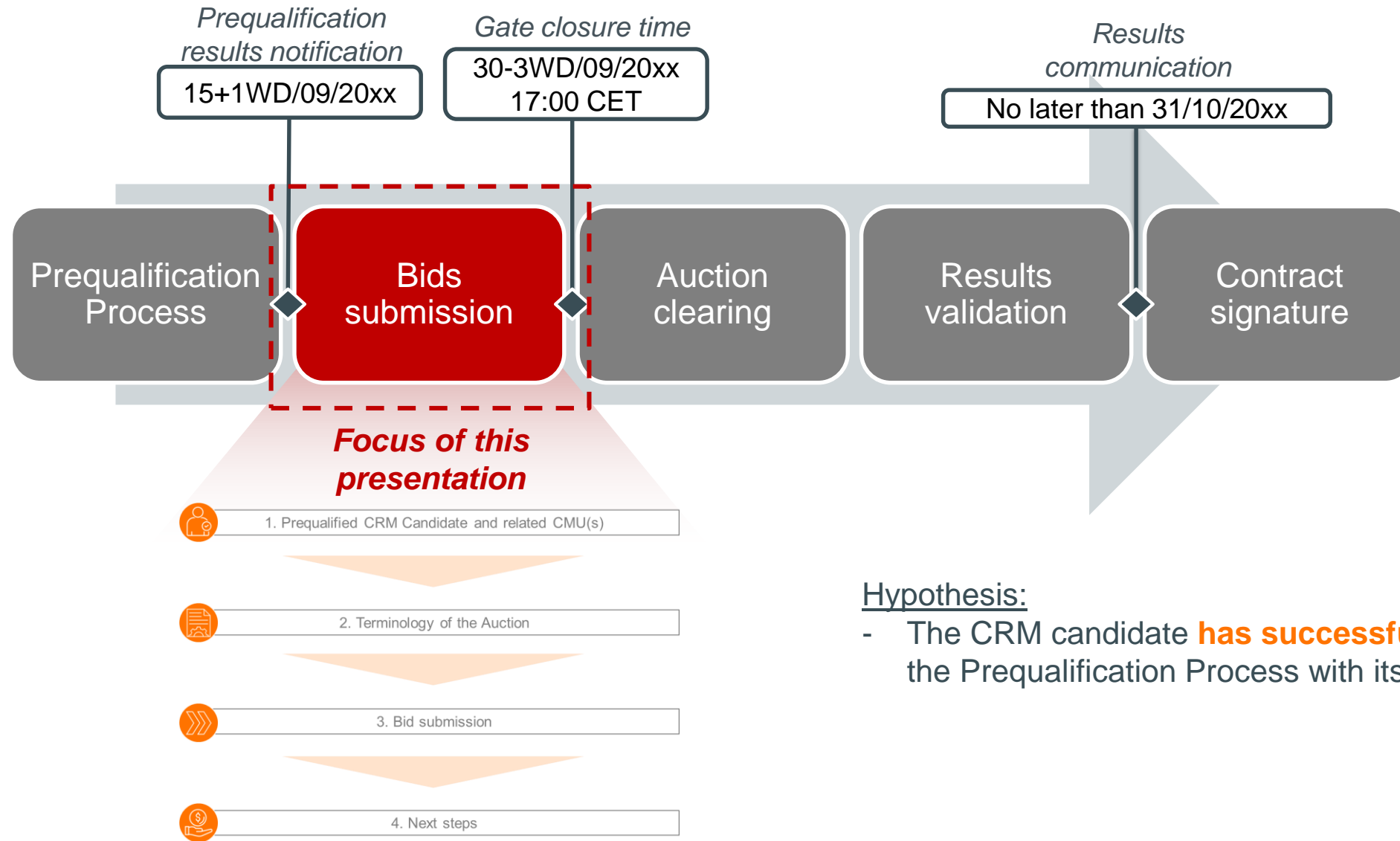
Given that the CRM process consists of several steps, and for each of these steps, several layers of information and details are relevant, it is to be understood that this document focuses on most pertinent auction aspects.

By no means, the use cases replace the rules in the relevant Laws, Royal Decrees, and regulatory approved documents.

The choices in the examples are only made for illustrative purposes and do not imply any judgement. All the figures and numbers used for these use cases are purely fictive. These numbers nor the use cases presented should be interpreted as representing a concrete case or a concrete situation of the Belgian capacity market or an implied proposal for any CRM parameter.

The use cases developed in this document are based on the chapter *Auction Processes* of the Functioning Rules as known at the moment of writing and shared with market parties on 28/08/2020. It also obviously follows the context set by the Electricity Law.

Auction process flow

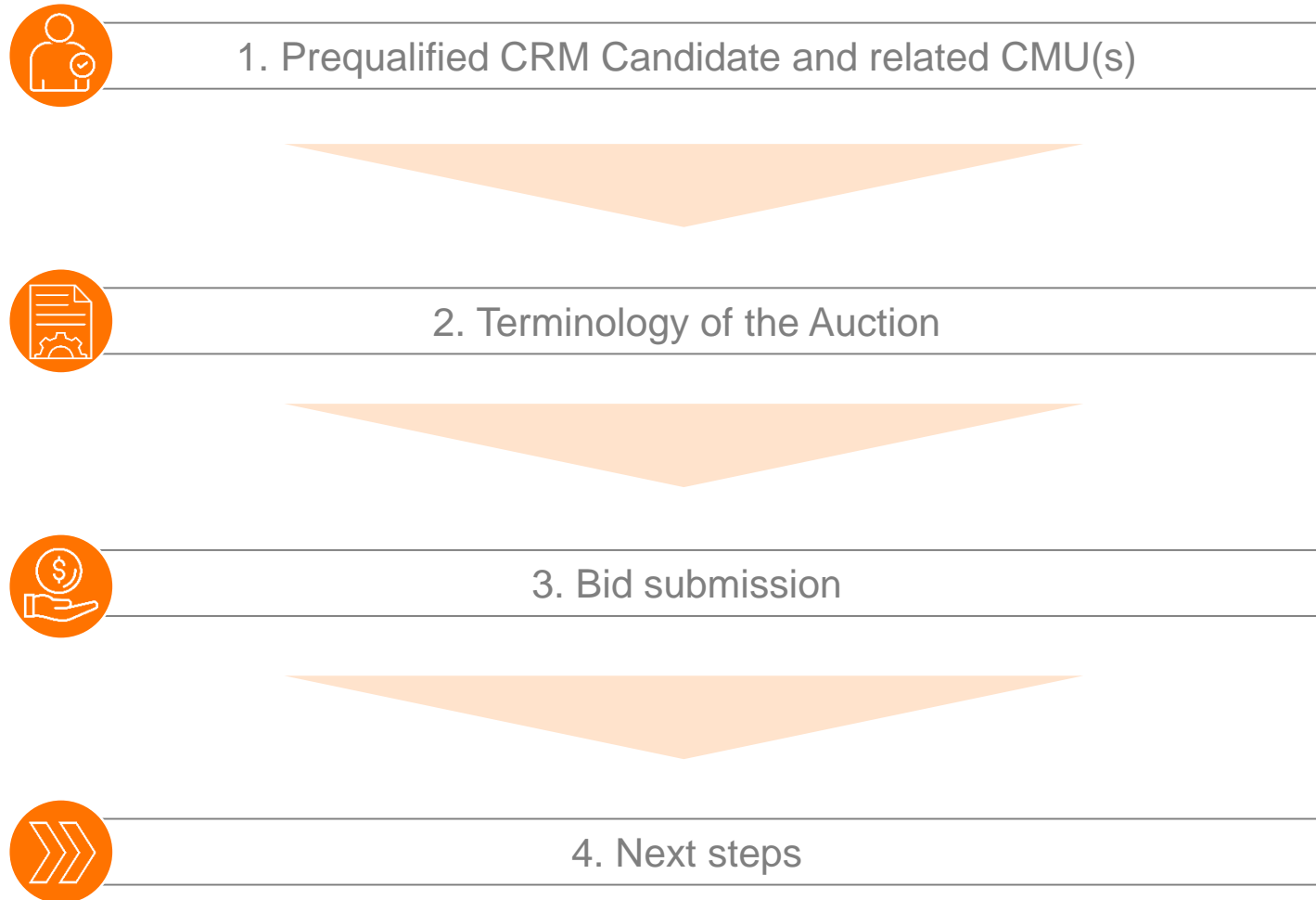


Hypothesis:

- The CRM candidate **has successfully passed** the Prequalification Process with its CMU

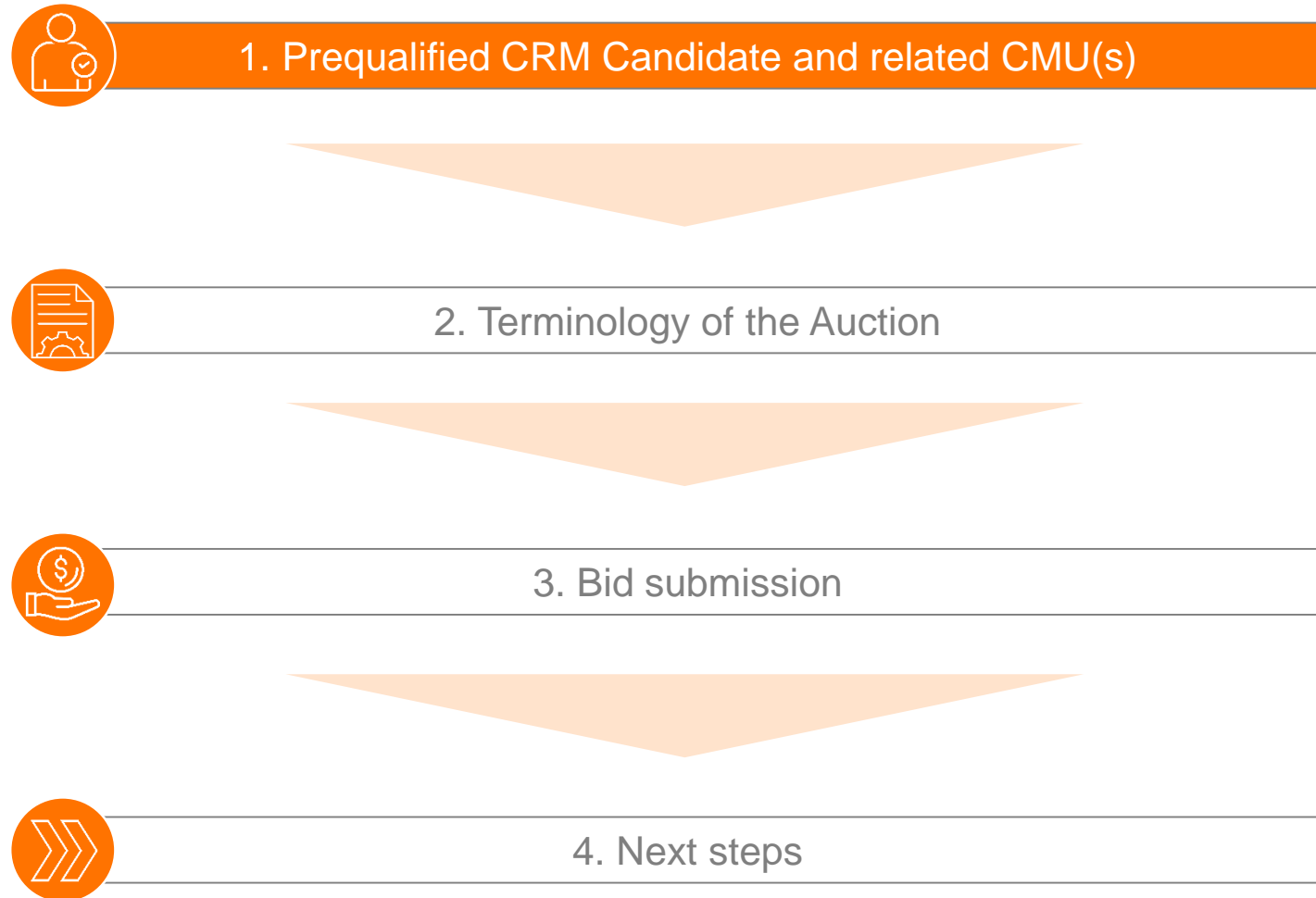
Use case structure

The Auction will be described according to the following flow:



Use case structure

The Auction will be described according to the following flow:



1. The Prequalified CRM Candidate and its CMU(s)

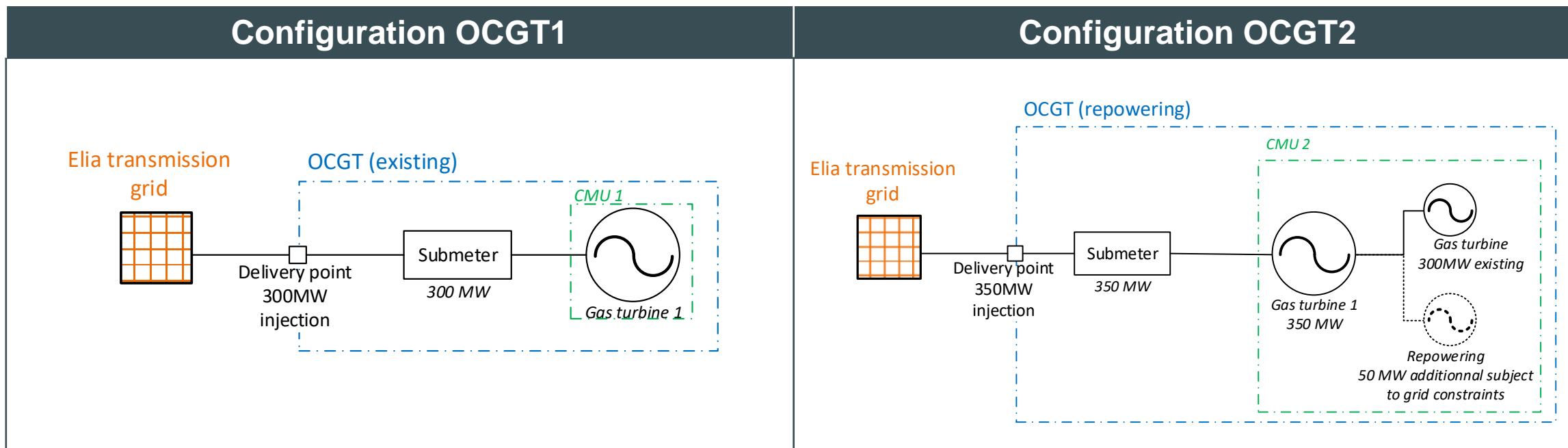
- **Repower.SA/NA is owner of an Existing OCGT power plant** of 300 MW (CMU1)
- He has been duly prequalified during the Prequalification Process of 2021, to participate in the 2021 Auction for the 2025 Delivery Period
- As its gas turbine is old, an alternative for the site is to transform it in a new OCGT
- Repower has the intention to potentially repower his OCGT power plant of 300 MW to transform it into an OCGT power plant of 350MW
- The 300MW existing connection capacity is considered as acquired for the new OCGT project (as long as process of definitive decommissioning specified in art. 4bis of Electricity Act is not initiated) and can therefore not be part of the Grid Constraints, solely 50MW can be taken into account.

Repower want to offer two different projects:

- OCGT without any transformation (300MW) → CMU1 as "Existing"
- OCGT with transformation (350MW) → CMU2 as "Additional"
 - Of which 300MW are not under any possible Grid Constraints
 - Of which 50MW are possibly under Grid Constraints



1. The Prequalified CRM Candidate and its CMU(s)



Considering the Gas Turbine, **the same Delivery Point** is being used for both projects of the Existing OCGT (CMU1) and the Repowered OCGT (CMU2)



1. The Prequalified CRM Candidate and its CMU(s)

- Those two projects were duly prequalified during the Prequalification Process
- Repower is then considered as **Prequalified CRM Candidate**
- OCGT2 project use the repowered gas turbine of 350 MW (considered as Additional)
- Those projects are **mutually** exclusive as the candidate has no intention to build a new turbine next to the existing but either keep the existing (300 MW) or repower it (350 MW).
- The CMU2 has no particular Grid Constraints. CRM Candidate can sign the technical agreement with ELIA
- An investment file for the repowering of the OCGT is sent to CREG (request of 8 year). In conclusion of their analysis, CREG confirms the capacity category of 8 year. CMU 2 is therefore not subject to the intermediate price cap.

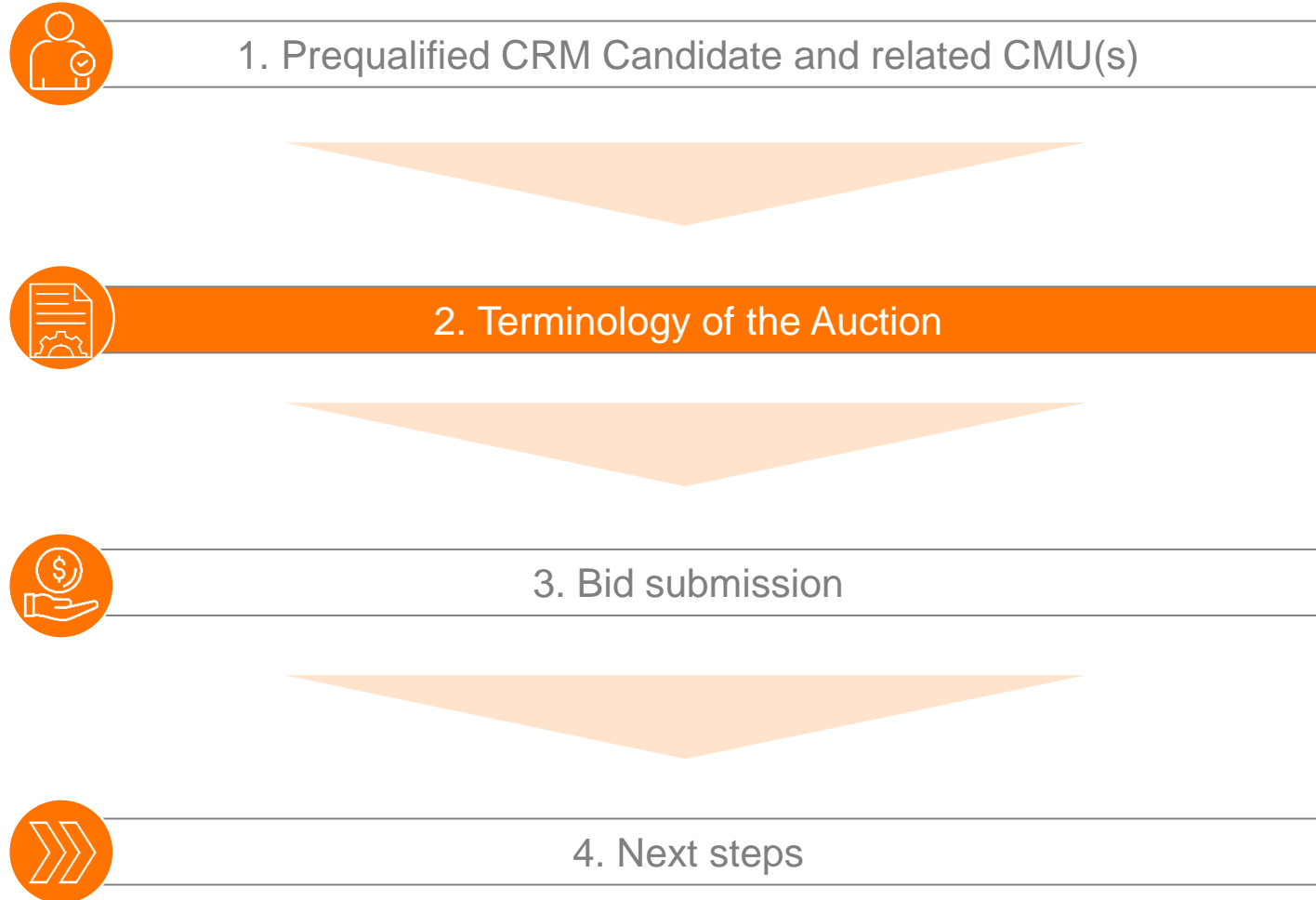


1. The Prequalified CRM Candidate and its CMU(s)

Technology		Configuration OCGT1	Configuration OCGT2
		• OCGT (GT) 300 MW	• OCGT (GT) of 350MW
CRM Capacity	Type	Existing	Additional (350 MW)
	Nominal reference power	• CMU1: 300MW	CMU2: 350 MW
	Opt-out	• CMU1: 0MW	CMU2: 0 MW
	Reference power	• CMU1: 300MW	CMU2: 350 MW
	Derating factor	0,92	0,92
	Eligible volume	• CMU1: 276MW	CMU2: 322 MW
	Grid constraints	No Grid Constraints as existing capacity	No possible Grid Constraints on 300 MW as existing connection capacity. Possible GC on 50MW additional capacity.
Authorized Capacity Contract Duration		• 1 year	• 8 years

Use case structure

The Auction will be described according to the following flow:





2. Terminology of the Auction applicable

Bid : Repower has to submit Bids for each of his CMUs. Among other requirements, every Bid is indivisible, related to one CMU only, and must contain a Bid Price, a Capacity Contract Duration and volume.

Mutually exclusive Bids : As Repower has no intention to develop both projects in parallel, the Bids on CMU1 (GT) of the OCGT Existing configuration are mutually exclusive of the Bids of the CMU2 in the Repowered OCGT configuration.

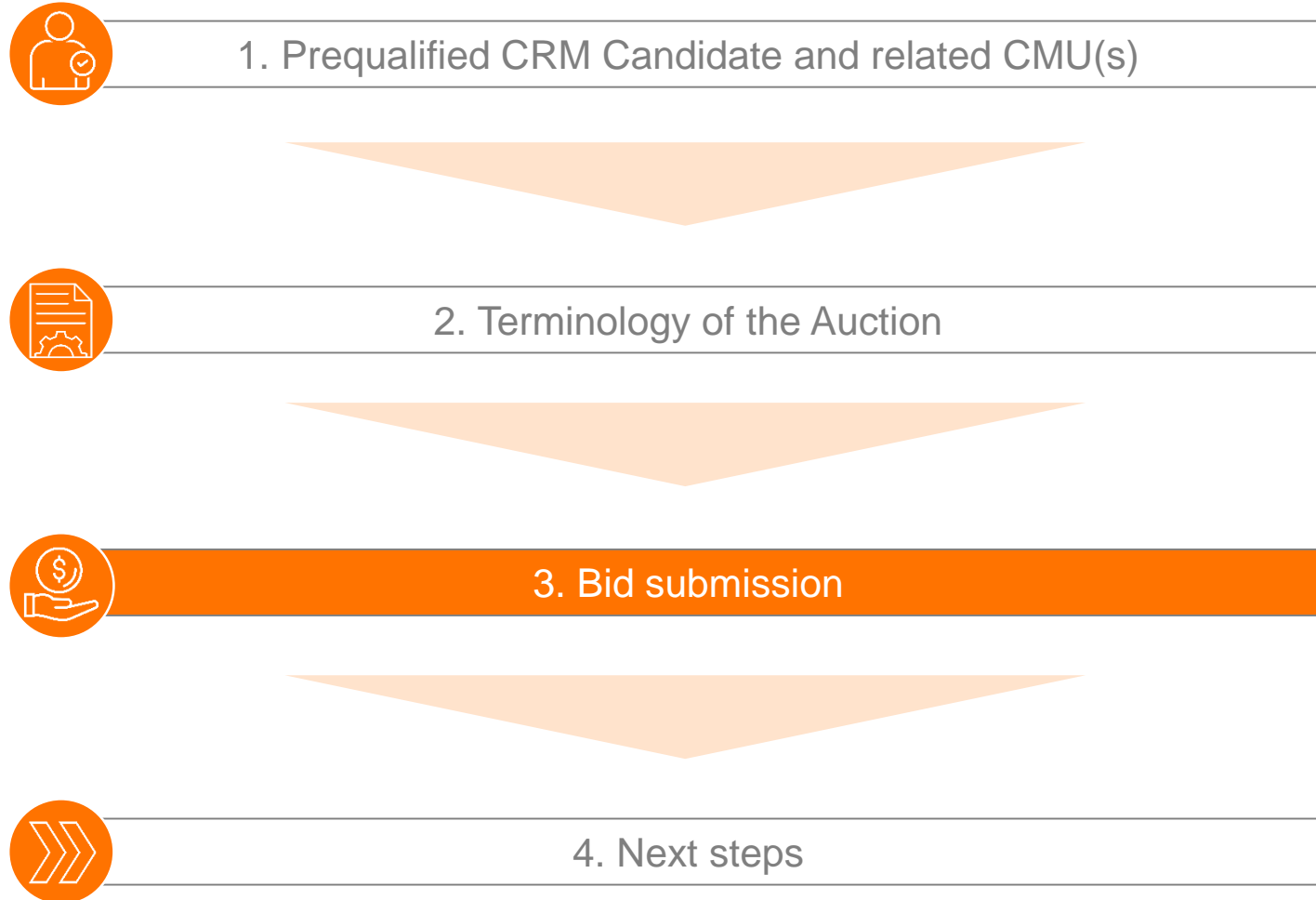
Linked Bids: As Existing OCGT and the OCGT2 project don't present more than one CMU, and that there are no technical dependencies, the Bids related to those CMUs cannot be "Linked Bids".

Intermediate Price Cap: Repower only introduced an investment file to CREG for the additional capacity (CMU2) corresponding to the extension of existing 300 MW to 350 MW.

Bids related to CMU 1 are therefore subject to the Intermediate Price Cap while bids related to CMU 2 (8 year capacity category validated by CREG) are only subject to the Global Price Cap.

Use case structure

The Auction will be described according to the following flow:



3. Bid elaboration by the Prequalified CRM Candidate

Repower must elaborate his Bids for all his two projects following the Functioning Rules.

He chooses to offer the three following **combinations** :

- Combination 1: OCGT1 with its Eligible Volume of 276MW
- Combination 2: OCGT1 with 250MW instead of 276MW
- Combination 3: OCGT2 for 8 years Capacity Contract Duration

				Configuration 1	Configuration 2
				CMU 1	CMU 2
Combination	1: OCGT 1	1 year	276 MW	X	
	2: OCGT 1	1 year	250 MW	X	
	3: OCGT 2	8 years	322 MW		X



3. Bid elaboration by the Prequalified CRM Candidate

EnergyProducer bidding strategy

Bids	CMU ID	CMU Status	Price (€/kW/year)	Volume (MW)	Contract duration (years)	Linked with (bids)	Exclusive with (bids)
1	CMU1	Existing	18	276	1	/	2, 3
2	CMU1	Existing	19	250	1	/	1, 3
3	CMU2	Additional	40	322	8	/	1, 2

Intermediate Price Cap = 20€/kW/year

Global Auction Price Cap=70€/kW/year



3. Bid submission – Mockups: Initial screen

Home

Pre-qualification

Auction

Secondary Market

Auction demo

Profile

Log Out

Help

CRM Auction Dashboard

Delivery Period

2025

Auction Type

Y-4

#23A2ZE4F

Jean Dumont

Compliance	Bid ID	CMU ID	CMU Status	Volume (MW)	Price (€/kW/year)	Contract Duration	Linked with Bid ID	Mutually Exclusive with Bid ID	Bid Status

Global Price Cap (€)

70€/kW/year

Intermediate Price Cap (€)

20€/kW/year

Save as draft

Compliance Check

Submit

3. Bid submission – Mockups: Creating the first bid

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CRM Auction Dashboard

Delivery Period2025

Auction TypeY-4

#23A2ZE4FJean Dumont

Compliance	Bid ID	CMU ID	CMU Status	Volume (MW)	Price (€/kW/year)	Contract Duration	Linked with Bid ID	Mutually Exclusive with Bid ID	Bid Status

Bid

CMU ID

CMU

Volume (MW)

276

Price (€)

18,00

Contract Duration (years)

1


OK


Global Price Cap (€)

70€/kW/year

Intermediate Price Cap (€)

20€/kW/year





Save as draft

Compliance Check

Submit



3. Bid submission – Mockups: All bids are created

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CRM Auction Dashboard

Delivery Period2025

Auction TypeY-4

#23A2ZE4FJean Dumont

Compliance	Bid ID	CMU ID	CMU Status	Volume (MW)	Price (€/kW/year)	Contract Duration	Linked with Bid ID	Mutually Exclusive with Bid ID	Bid Status
<input type="radio"/>	1	CMU1	Existing	276	18,00	1	▼	▼	Created
<input type="radio"/>	2	CMU1	Existing	250	19,00	1	▼	▼	Created
<input type="radio"/>	3	CMU2	Additional	322	40,00	8	▼	▼	Created

Global Price Cap (€)70€/kW/year

Intermediate Price Cap (€)20€/kW/year

Save as draft

Compliance Check

Submit



2025

Y-4

Jean Dumont

Global Price Cap (€)	Intermediate Price Cap (€)
70€/kW/year	20€/kW/year



Submit

3. Bid submission – Mockups: All bids are created

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Delivery Period

2025

Auction Type

Y-4

#23A2ZE4F

Jean Dumont

Compliance	Bid ID	CMU ID	CMU Status	Volume (MW)	Price (€/kW/year)	Contract Duration	Linked with Bid ID	Mutually Exclusive with Bid ID	Bid Status
	1	CMU1	Existing	276	18,00	1	▼	2, 3	Submitted
	2	CMU1	Existing	250	19,00	1	▼	1, 3	Submitted
	3	CMU2	Additional	322	40,00	8	▼	1, 2	Submitted

Global Price Cap (€)

70€/kW/year

Intermediate Price Cap (€)

20€/kW/year

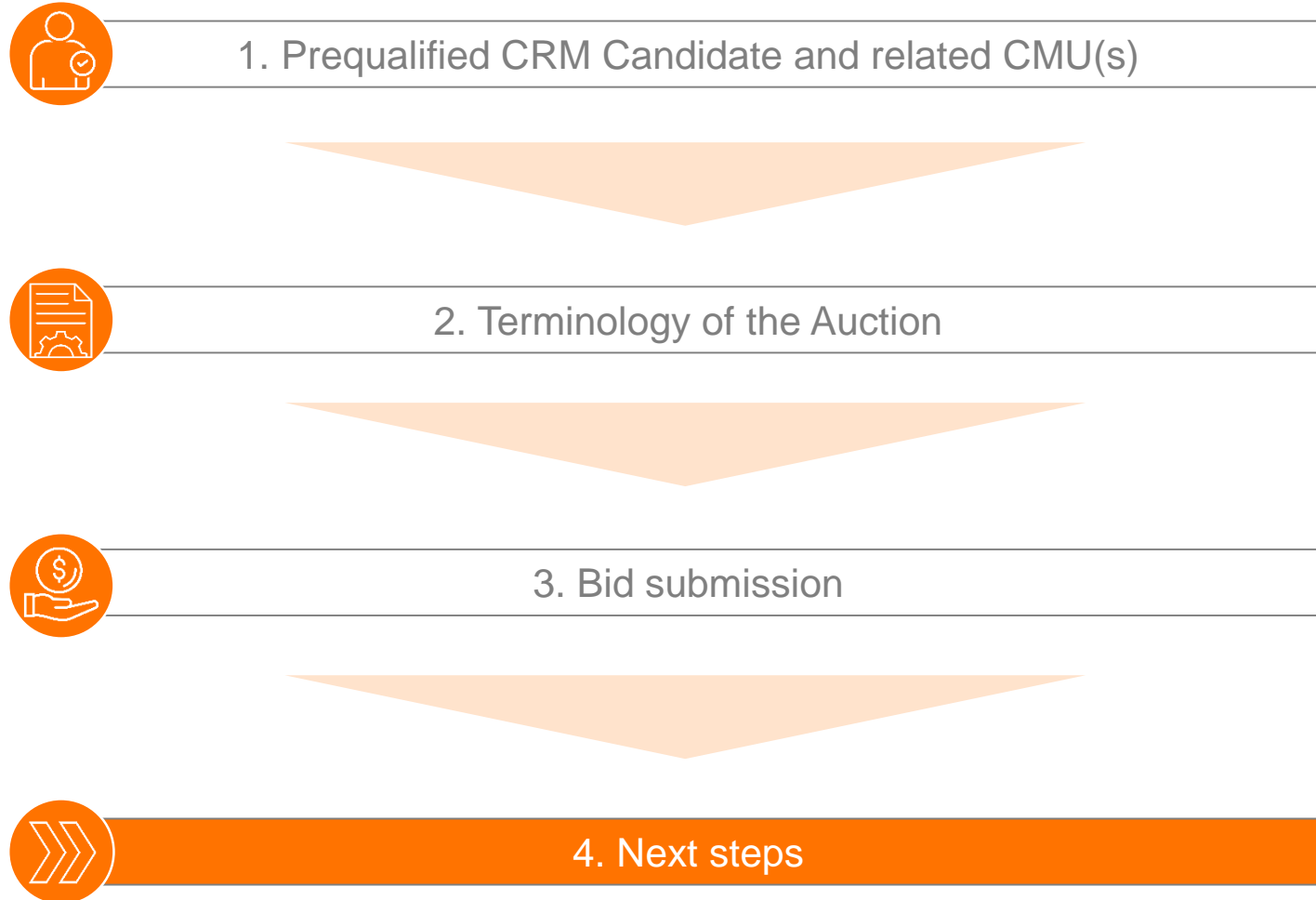
Save as draft

Compliance Check

Submit

Use case structure

The Auction will be described according to the following flow:





4. Next steps

Auction clearing



- Auction clearing as described in the Functioning Rules
- Y-4 2021 for 2025 Delivery Period = **pay-as-bid rule**
- Capacity Remuneration will be set at 18€/kW/year starting from the 2025 Delivery Period

Bids 1 (representing the existing OCGT) is selected in the Auction

Results validation



- Result validation according to modalities set by Royal Decree Control
- Result communication to Repower

Auction results		
Selected bids		
	Selected Bid volumes	CMU1: 276 MW
	Related Price	18€/kW/year
	Capacity contract duration	1 year
Remaining Eligible Volume		0 MW
Issuance date of the 1 st quarterly report		/



4. Next steps

Capacity contract signature

- As next step, Repower signs a Capacity Contract with the contractual counterparty.



Once the Capacity Contract is signed, Repower enters the pre-delivery phase

Thank you.

