

Renewable energy cross-border auctions: benefits, models, and design recommendations

Executive Summary

Authors:

Agustin Roth, Felix von Bluecher, Fabian Wigand (Guidehouse)

Cross-border auctions: benefits and models

A renewable energy (RE) cross-border auction can be understood as a cooperation between two or more Member States (MSs), where project developers from more than one country can hand in their bids, thus creating direct competition between projects from all involved countries. In addition, support payments will flow across borders.

The key benefit of cross-border auctions is to increase auction efficiency by accessing better natural resource potential, higher market values, lower cost of capital and increasing competition compared to purely national auctions [1]. Despite the potential gains of cooperation, most countries have so far been reluctant to make use of cross-border auctions. Nevertheless, an increasing number of cross-border auctions might be triggered in the near and mid-term future, due to certain policy development, among others: voluntary opening of national support schemes under the REDII; the new EU Financing Mechanism, increased RE targets in MSs combined with a lack of domestic potential sites, and a new funding line in the Connecting Europe Facility (CEF).

Three basic models of cross-border auctions with increased complexity were identified (Figure 1): a) unilateral (only one country opens its support scheme to bidders in a cooperating MS); b) mutual (both cooperation countries implement separate cross-border auctions); c) joint auction (cooperation countries set up a joint auction, awarded projects are assigned to one country's support scheme or a jointly established fund). Auction theoretic analyses of different forms of cross-border auctions and their implications with regard to allocative efficiency and awarded prices were conducted [2].

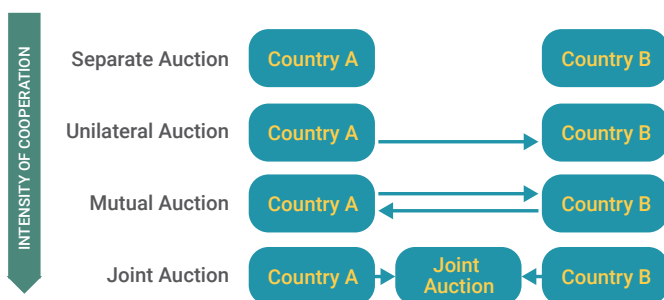


Figure 1 – Overview of types of cross-border auctions

Recommendations for designing and implementing cross-border auctions

The following recommendations for designing and implementing cross-border auctions were elaborated [1]:

- Although market and wider regulatory conditions generally differ between countries (e.g., corporate taxation) we recommend refraining from levelling differences artificially. This allows to tap into the full efficiency potential of cross-border auctions.
- To avoid boom and bust cycles, schedules of national and cross-border auctions should be synchronised in case these exist in parallel
- A combination of shorter realisation deadlines¹ and a higher financial prequalification² instead of material prequalification criteria is preferred to not discriminate against certain bidders. Due to differing national regulations, for example on permitting, it is not advisable to define extensive prequalification requirements on project predevelopment as this could favour bidders of one country over bidders from other countries.
- To identify the right support premium, the difference in market values between MSs needs to be considered. No design is clearly preferable. A fixed premium is the easiest option regarding the implementation in cross-border and joint auctions. It strongly favours bidders from countries with higher (expected) market values and thus lowers the attractiveness of the cross-border auction for bidders from countries with lower (expected) market values. A sliding premium based on national market values implies relatively low risks and financing costs. However, the level of support necessary is uncertain. In case of a joint auction, the allocation of plants between countries is also more complex if a sliding premium is chosen. Our recommendation for open auctions is to use the prevailing national premium.

In addition, given the fact that most countries (besides Denmark and Germany in 2016) have been reluctant to implement cross-border

¹ Realisation deadlines should consider local planning and permitting processes.

² However, the level of financial prequalification should not be too high in order not to disadvantage bidders from markets with less favourable access to financing.

auctions due to their complexity, we want to guide policymakers by structuring the implementation process in 4 phases (Figure 2) and providing checklists covering elements that MSs may want to consider. These can be consulted in our guidance document “[Guidance on implementing cross-border renewable energy auctions](#)” [3].

Despite the reported benefits, cross-border auctions pose challenges. Hosting MSs face a reduction in the number of sites available for the RE deployment counting towards its own RE and system integration costs. The MS supporting RES outside of its territory can face lack of political acceptance. An adequate and clear communication strategy of the net benefits for both, hosting and contributing MS, and an active management of local concerns can help mitigate these barriers [4].

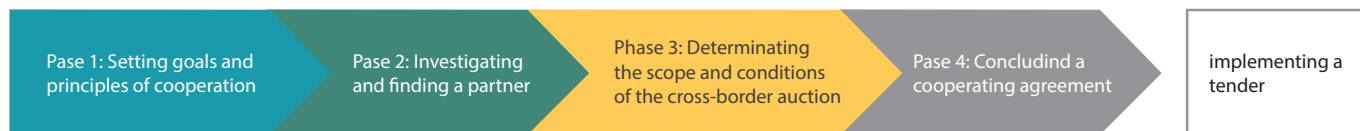


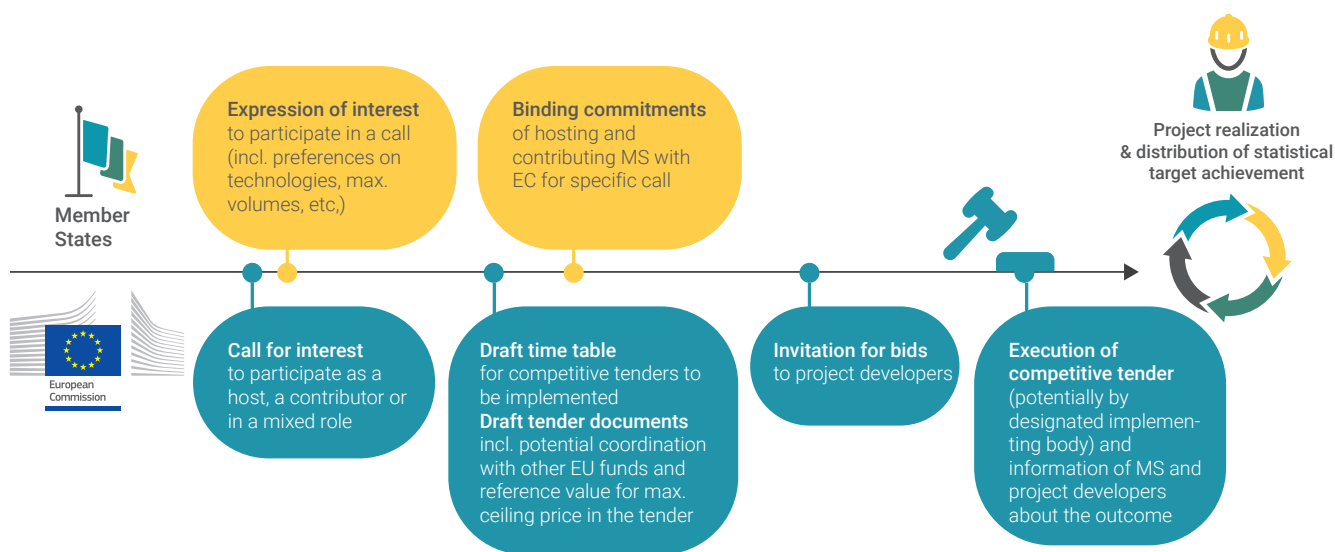
Figure 2 – Implementation process of a cross-border auction in four phases

The New EU RE Financing Mechanism

Besides the cross-border auction models described above, the EU RE Financing Mechanism represents an interesting cross-border cooperation case [5]. Contributing MSs make voluntary financial contributions. An RE tender is conducted to determine and allocate support levels to projects in MSs that are willing to host RE projects awarded under the mechanism. Hosting MSs transfer the RE target statistics from the RE installations back to the mechanism which then redistributes the statistics to the contributing MSs according to their share in the financial contributions.

Figure 3 presents an overview of the different steps of the mechanism.

Key rationales for MSs to participate in the cross-border auction implemented via the EU RE financing mechanism are that contributing MSs can access cost-effective RE potentials with resulting support cost savings (compared to national deployment) while experiencing lower transaction costs compared to the individual cooperation mechanisms, given that it does not require a bilateral or multilateral negotiation of, for instance, support schemes, allocation of costs and benefits, and contracts.



List of references

- [1] Design options for cross-border auctions (2019): <http://aures2project.eu/2019/05/02/design-options-for-cross-border-auctions/>
- [2] Auction-theoretic aspects of cross-border auctions (2019): <http://aures2project.eu/2019/10/28/auction-theoretic-aspects-of-cross-border-auctions/>
- [3] Guidance on implementing cross-border renewable energy auctions (2021): <http://aures2project.eu/2021/06/28/guidance-on-implementing-cross-border-renewable-energy-auctions-2/>
- [4] AURES II Podcast Episode 7 (2021): International auctions – Present and future of cross-border auctions for renewable energy in the EU; models of cross-border auctions; practical guidelines on implementation of cross-border auctions. Guests: Malte Gephart & Felix von Bluecher (Guidehouse). <http://aures2project.eu/podcast/>
- [5] The new renewable energy financing mechanism of the EU in practice: A cooperation case study (2020): <http://aures2project.eu/2020/11/03/the-new-renewable-energy-financing-mechanism-of-the-eu-in-practice/>